Textile Industries

JUNE, 1950

formerly COTTON Textile Industries

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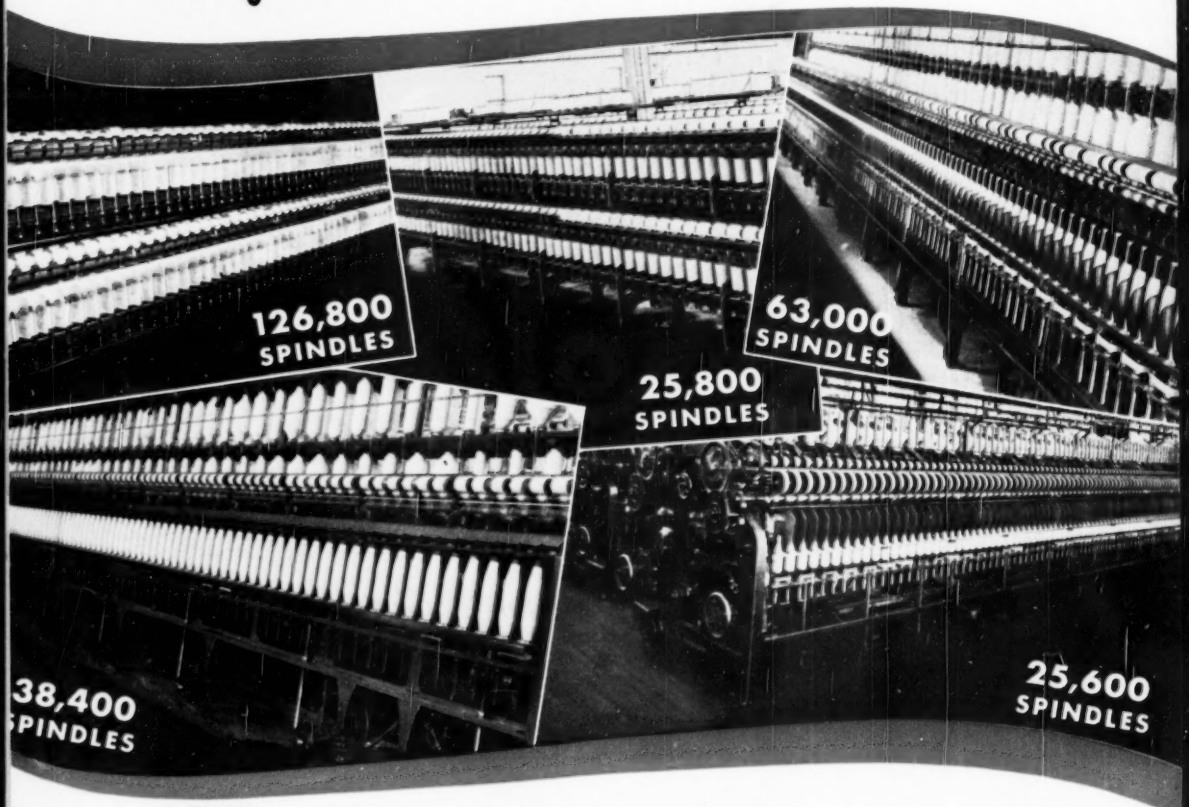
TYPICAL INSTALLATIONS OF

Marquette ROLLER BEARING SPINDLES



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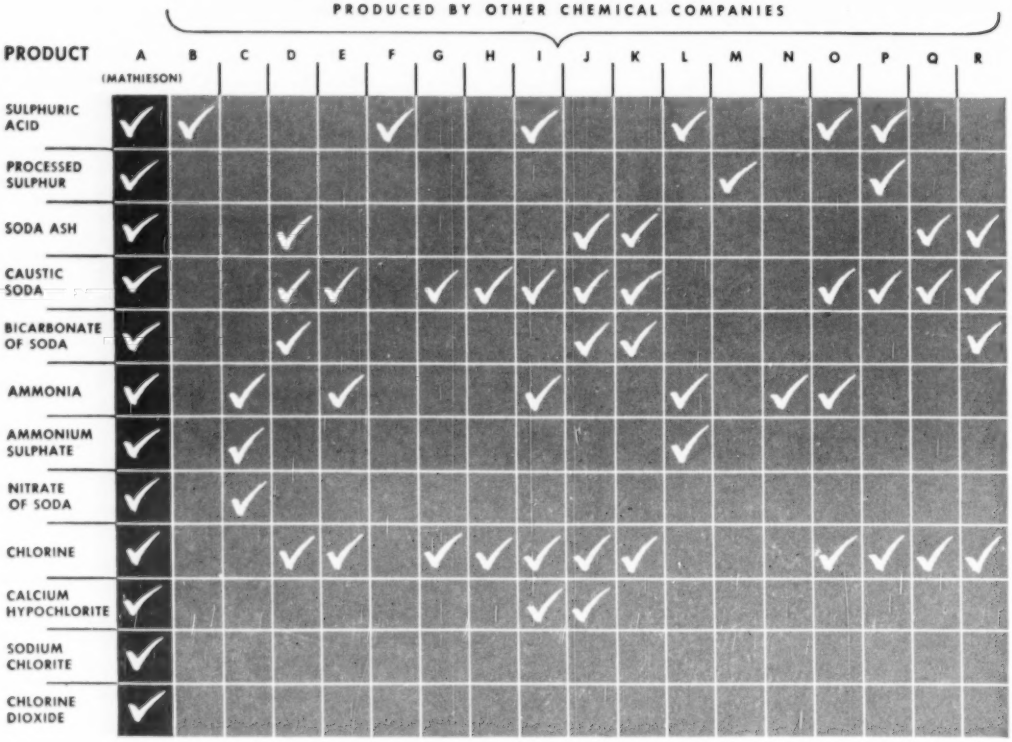

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Volume 114 Number 6

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Volume 114, Number 6
June, 1950

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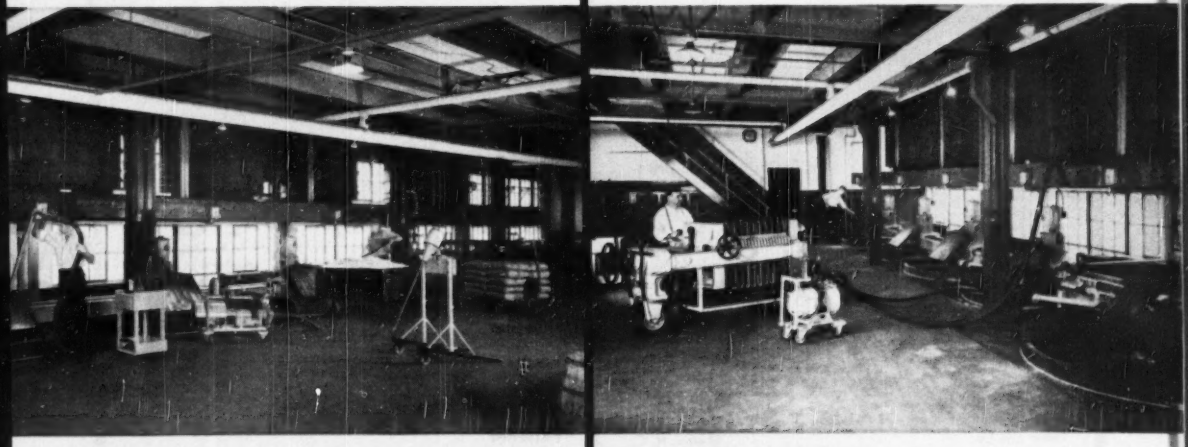

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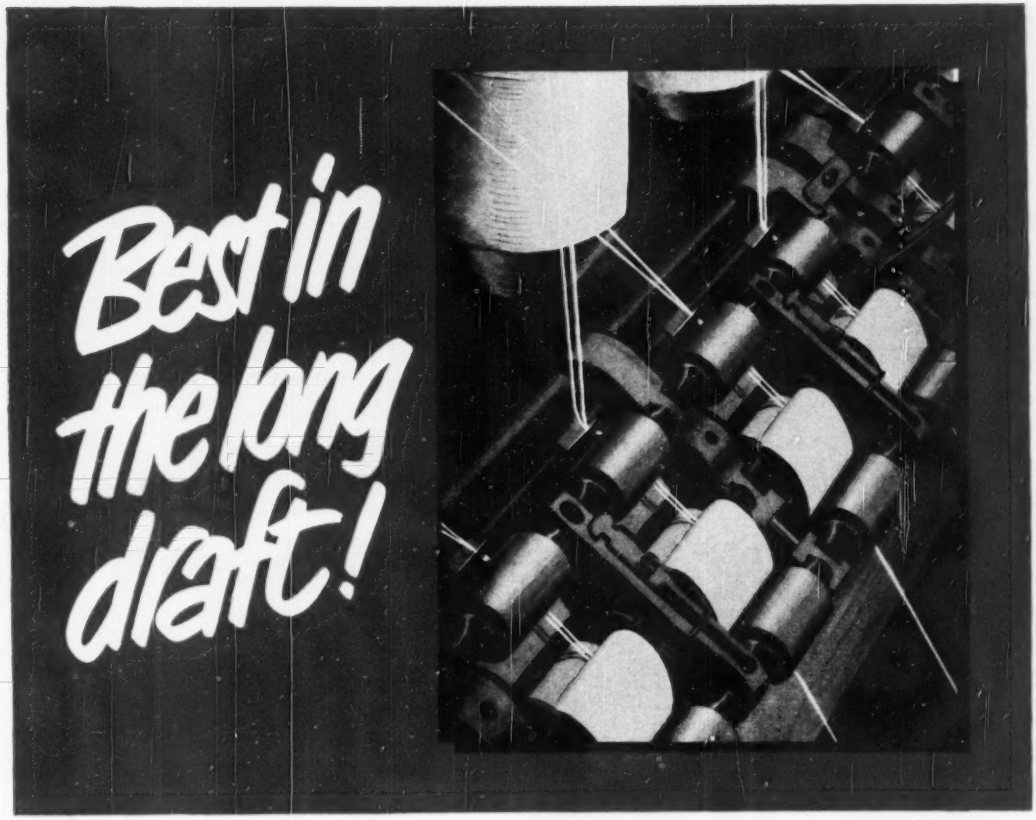

Dayco Long Draft Aprons last longer, give up to 10% more uniform yarn!

Here is a Dayco Long Draft Apron. It will outperform any apron on your frames, give you up to 10% more uniform yarn. It will stay on the frames when you start up, too.

This Dayco Apron is made in one endless piece, without laps or splices that can tear the sliver. Its thickness is uniform. (To get technical: inside diameters are held to a tolerance of 1/64", thickness to .050", plus or minus .002".) Such accuracy gives as much as 10% more uniform yarn. Correct friction coefficient on both inside and outside surfaces. Each apron is tested to meet customer specifications for single or double apron system.

The Dayco Long Draft Apron WILL: last longer, give more uniform yarn, handle natural and synthetic fibers equally well, keep yarn clean (white drafting surface). It WILL NOT: curl, split, crack, break, distort, stretch or groove. Won't flip off, pick up lint, mark the yarn, or be affected by heat, cold, oils, humidity, dyes or hard ends. To cut costs in your long draft operations, write:

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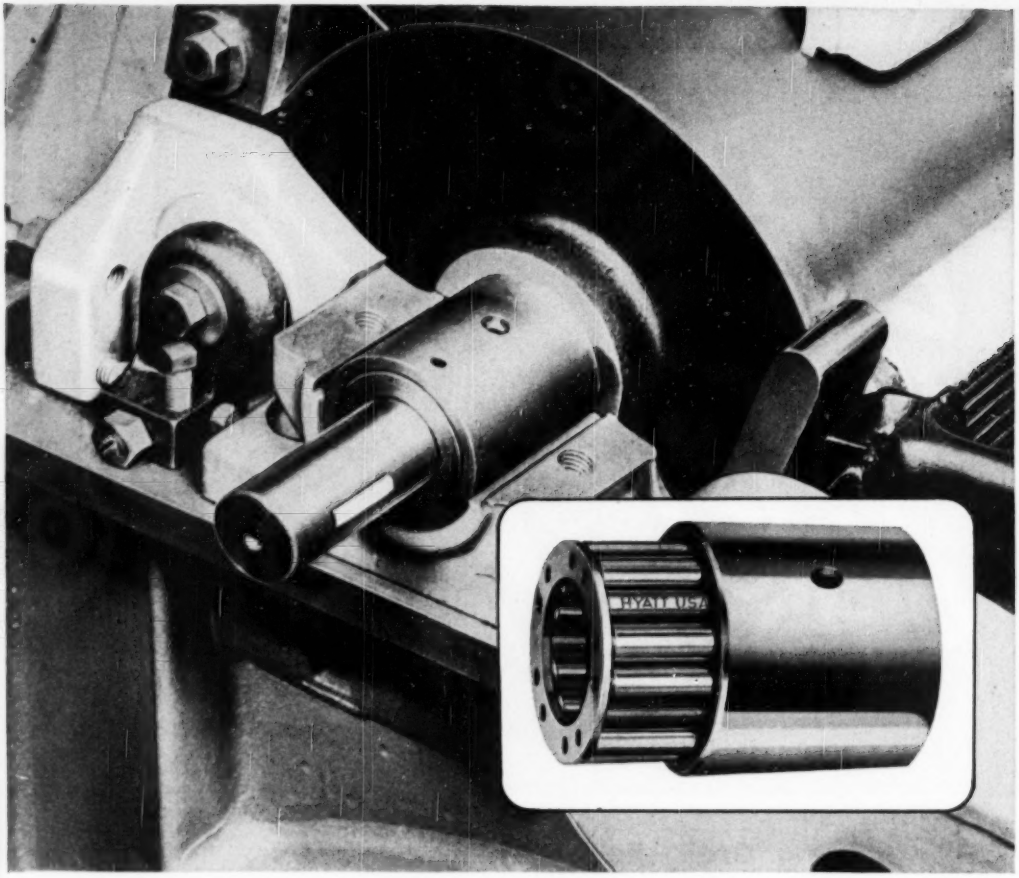

A simple-positive-inexpensive way to lick your "lickerin bearing" troubles

After observing Hyatt Roller Bearings in actual use for several years, Saco-Lowell engineers were completely convinced of their advantages over plain lickerin bearings.

Now all new Saco-Lowell revolving flat cards are being built with Hyatt Roller Bearings as standard equipment for the lickerin.

For your existing cards, you can change over your plain lickerin bearings to Hyatt Roller Bearings. Saco-Lowell engineers will be glad to discuss this conversion with you. We are sure you will be pleased with the results in over-all efficiency.

Further details upon request from Hyatt Bearings Division, General Motors Corporation, Harrison, New Jersey.

HYATT ROLLER BEARINGS

STYMER sizes a billion yards of acetate

How mills save time, trouble and expense

More than a billion yards of acetate, in almost all principal constructions has been woven from warps sized with Stymer, Monsanto's synthetic size. Success in the mills is another reason why the list of Stymer users is growing steadily.

MILL MANAGERS get savings because Stymer reduces operating time. Mill men generally realize a number of advantages from mixing the size to finishing the fabric.

ADVANTAGES IN SIZING: Smooth warps; no static build-up; warp splits easily at "bust bars;" minimum build-up on cans; low dry can temperatures are possible; no can covers are necessary; large mixes of the size can be stored for long periods; does not gel when cold and will not clog pipes or valves; no scum in size box, spin finishes emulsified; there is no throwaway.

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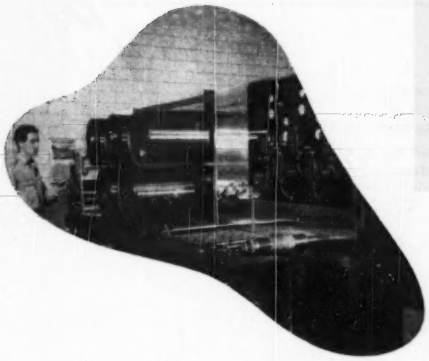
Stymer: Reg. U. S. Pat. Off.

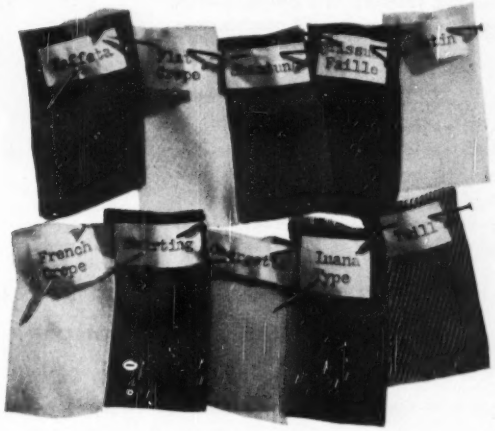


Test slasher screens new synthetic sizes before mill trials

This new pilot plant slasher rounds out the number of tests which Monsanto's textile labs run on new synthetic resins submitted by other Monsanto laboratories for consideration as sizes. The slasher saves time and labor at the mill by limiting trials to the most promising of the materials.

The slasher is designed to size from one to 300 ends at speeds of zero to 15 yards a minute and with a stretch up to 10%. Sized yarns can then be tested for tensile strength, elongation and size content. They can be examined microscopically in cross-section to determine size penetration. Abrasion studies are carried out on a cohesion tester, single-end yarn abrader, and the dynamic heddle abrasion tester.

The slasher consists of a size box, immersion roll, squeeze rolls, five drying cans, lease rods, reed and take-up beam.



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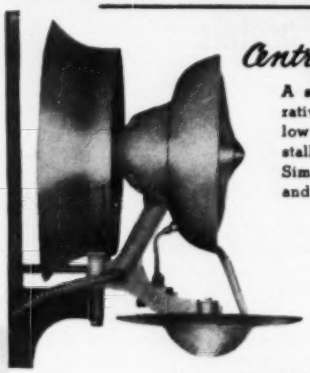

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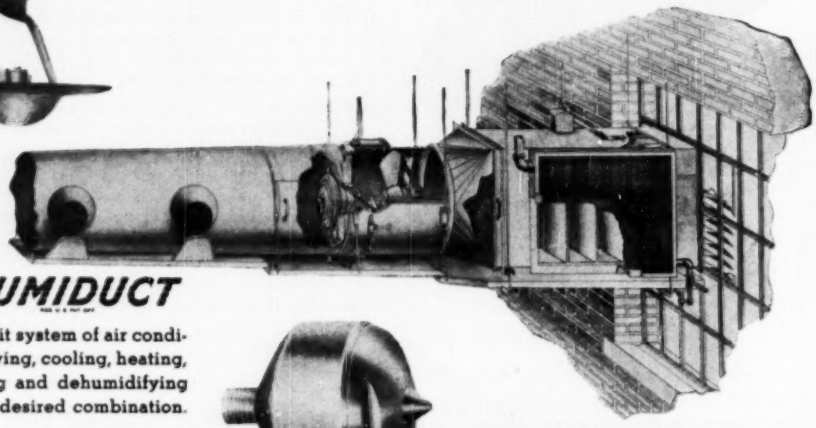

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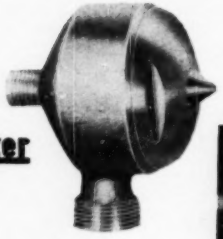

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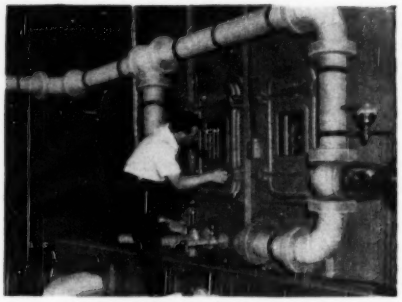

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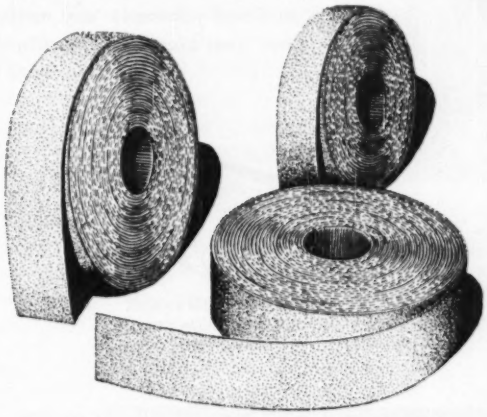

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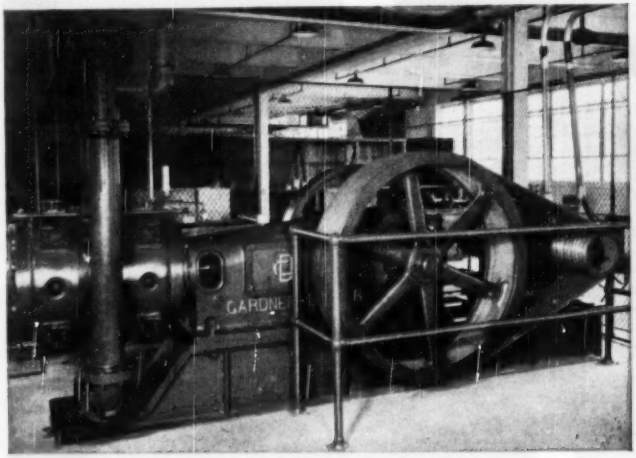

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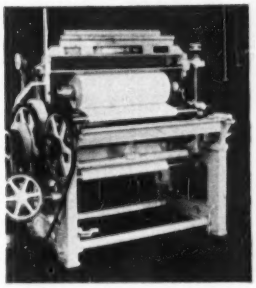
New Camachines are better than ever. If you're in the business of making and selling roll products it will pay you to show your customers the quality points of a smooth, modern *Camachine* roll. Here's what your customers like about rolls that are made on fast, efficient new *Camachines*. They like the uniform density from core to circumference. They like the clean cut edges of the strip. They like the straight smooth sides of the finished rolls. They like the durability of *Camachine* rolls in rough handling and shipping. And they like the smooth way *Camachine* rolls unwind, clean to the core. Start delivering modern *Camachine* rolls now and...



Get the facts on Camachine 6 —a fast slitter-rewinder for top quality rolls of binding tapes, felts, burlaps, coated fabrics, etc. Write for complete information.

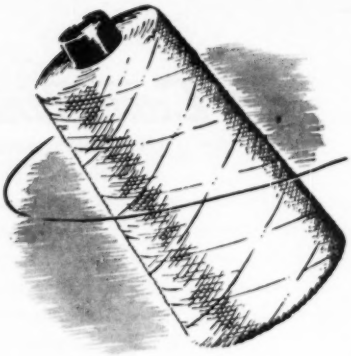
make your customers ask for more

Cameron Machine Company • 61 Poplar Street • Brooklyn 2, N.Y.

Camachine engineers will be pleased to consult with you on any roll production problem.

AA-321A

First the fiber...



Then the fabric...

That's the way successes grow!

for a fashion can't live
and a fabric can't live
if you start with the wrong fiber.

It's the fiber
that keeps sound merchandise sold
...that keeps buyers buying.

for success-building fibers

depend on Du Pont { **nylon** / **acetate rayon** / **viscose rayon**

Du Pont quality controls...
Du Pont's wealth of research...
all contribute to your success
with Du Pont textile fibers.

DU PONT
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...THROUGH CHEMISTRY

FOR NYLON... FOR RAYON

ACETATE DIVISION • NYLON DIVISION • RAYON DIVISION—

Rayon Department, E. I. du Pont de Nemours & Co. (Inc.), Wilmington 98, Delaware

...FOR FIBERS TO COME...LOOK TO DU PONT!

SPINDLES SPIN SMOOTHER WHEN SKF ROLLER BEARING EQUIPPED

Cylindrical Type, medium duty—for use with wooden bobbins and paper tubes.

Oil Cushion Ring Brake Type, heavy duty—provides effective damping action.

Because most power received by today's high-speed spindles is consumed by friction, low-cost operation demands bearings that reduce friction to the minimum. SKF-equipped Roller Bearing Spindles have been cutting costs and increasing efficiency in mills of every type and size for more than 25 years.

With SKF on the job, power savings average 15% . . . and permit the use of smaller motors and starting equipment. Twist is more uniform . . . breaking strength of yarn is greater . . . ends down are less. And because lubrication is sealed-in, oil throwing is eliminated . . . the spindle needs lubrication only once a year.

What's more, SKF Bolsters can be removed and replaced, when necessary, without renewing case or spindle blade. SKF Engineers can point out many ways in which you can shave production costs . . . improve the quality and salability of your fabrics. Why not call on them today?

SKF Industries, Inc., Philadelphia 32, Pa., the Pioneers of the Deep Groove Ball Bearing, Spherical Roller Bearing, Self-Aligning Ball Bearing. 7072

SKF
TEXTILE BEARINGS

8 REASONS WHY SKF IS PREFERRED BY ALL INDUSTRY

INTEGRITY — CRAFTSMANSHIP — METALLURGY — TOLERANCE CONTROL

SURFACE FINISH — PRODUCT UNIFORMITY — ENGINEERING SERVICE — FIELD SERVICE

Truly Evergreen ... BY THE SHELTON LOOMS

There's a phrase used in the national advertising of The Shelton Looms which should be significant to any dyer.

In speaking of the "Matched Kleersheen Colors" of its upholstery pile fabrics, The Shelton Looms refers to the "rich flowing colors of uniform intensity".

This phrase is also a compliment to Sandoz dyestuffs, for Sandoz has for many years supplied this fine house with colors of uniform characteristics in handling and service.

A green such as that shown in the illustration is not the easiest to make fast. Mills requiring such shades will find new efficiency in processing and assurance of light fastness by using the following level-dyeing Sandoz colors:

BRILLIANT ALIZARINE LIGHT BLUE 3F Pat. and XYLENE FAST YELLOW 2GP in combination.

And for any chrome, acid or direct dyes . . . or auxiliary chemicals . . . and for both natural and synthetic fibres . . . be guided by these successful "color achievements".

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SANDOZ *thinks ahead with textiles*

We moved our lab to Atlantic City

and introduced some "names" you will know for years to come

What did Universal "show" at the textile show?

Actually—a corner of our Research and Engineering Department.

There, but still in various stages of development, were the new UNIFIL Loom Winder which automatically winds and strips the bobbin right at the loom . . . the AUTO-CONER, an automatic drum winder with a knotter at each spindle . . . a high-speed precision winder with either an increasing or a constant yarn speed . . . a combination twister-coner equipped with Universal's new two-for-one spindle . . . three different direct take-up heads, one for rayon, one for acetate and one for tire cord continuous processing . . . Atwood's new UNIRAIL Uptwister which does not require lubrication of major parts for at least a year . . . Atwood's new high-speed UNIFLEX spindle which needs no more than a few drops of oil per year—together with some of the present models of winders and twisters which are, and will continue to be, virtually *standard* for their type of work.

These names—UNIFIL, AUTO-CONER, UNIRAIL, UNIFLEX—are names you will become increasingly familiar with in future months as these machines become available for sale.

Meanwhile, we appreciate the many comments and suggestions made by visitors to our display. We have *always* regarded our customers as our most valuable design engineers.

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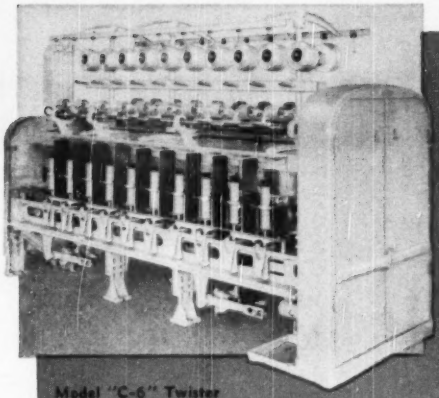
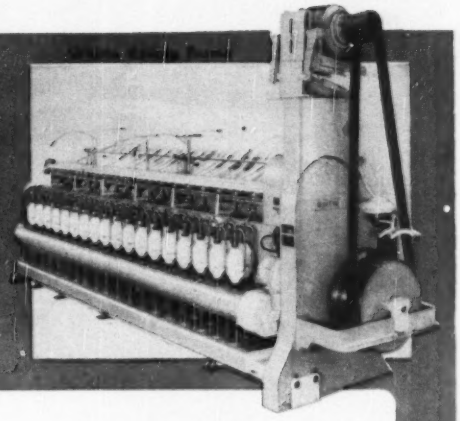
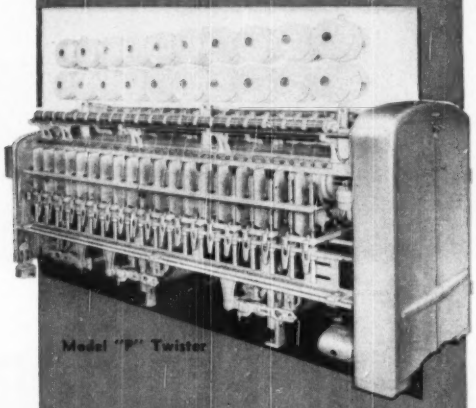


Model "C-6" Twister





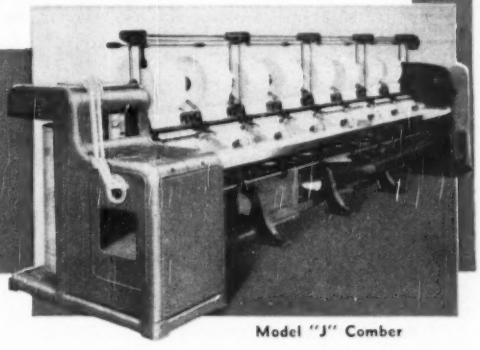
Model "P" Twister

Let's Talk Business

At the American Textile Machinery Exhibition you saw in operation new machines which Whitin has been developing and perfecting for many years. You saw the improved quality of the output of these machines . . . their increased speeds . . . their versatility in handling the entire range of natural and synthetic fibers.

The thing that vitally concerns you is what these machines can do to increase efficiency in *your* mill. Your Whitin representative will be glad to analyse the production of your present equipment . . . to show you how these Whitin machines can mean increased profits for you. This really is the time to talk business!

Model "P-2E" Drawing Frame



Model "J" Comber

Write today for folders giving complete information on any one or all of these new Whitin machines.

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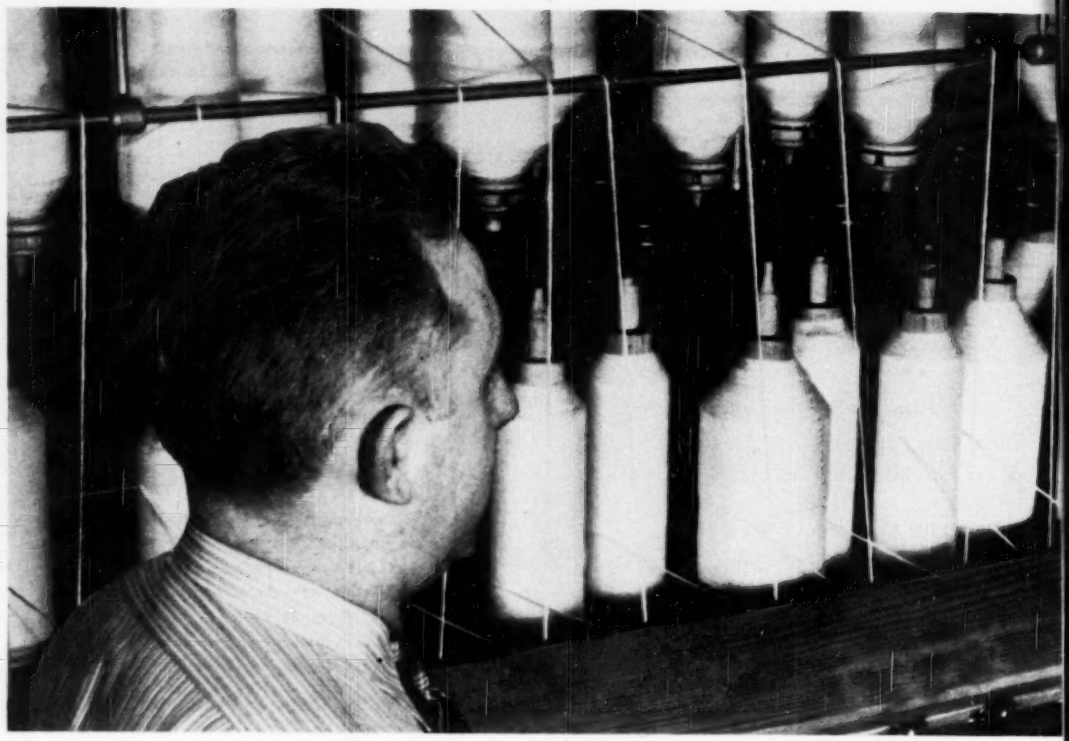


Lapping is no problem

You can forget about lapping when your frames are equipped with Armstrong's Accotex® Cots. These patented cots have an exclusive lap-resisting action that tends to repel broken ends. This action eliminates lapping as a serious mill problem. Just how Accotex Cots do this is shown in the photographs at right.

In addition to lap-control, these cots give you five to six years of top-quality spinning. An occasional buffing keeps them drafting like new.

In most mills, Armstrong's general purpose roll covering, NC-727 Accotex, will satisfy every spinning need. However, on frames where lapping is an especially severe problem, J-490 Accotex is recommended. It has an extra smooth surface that further inhibits lapping.

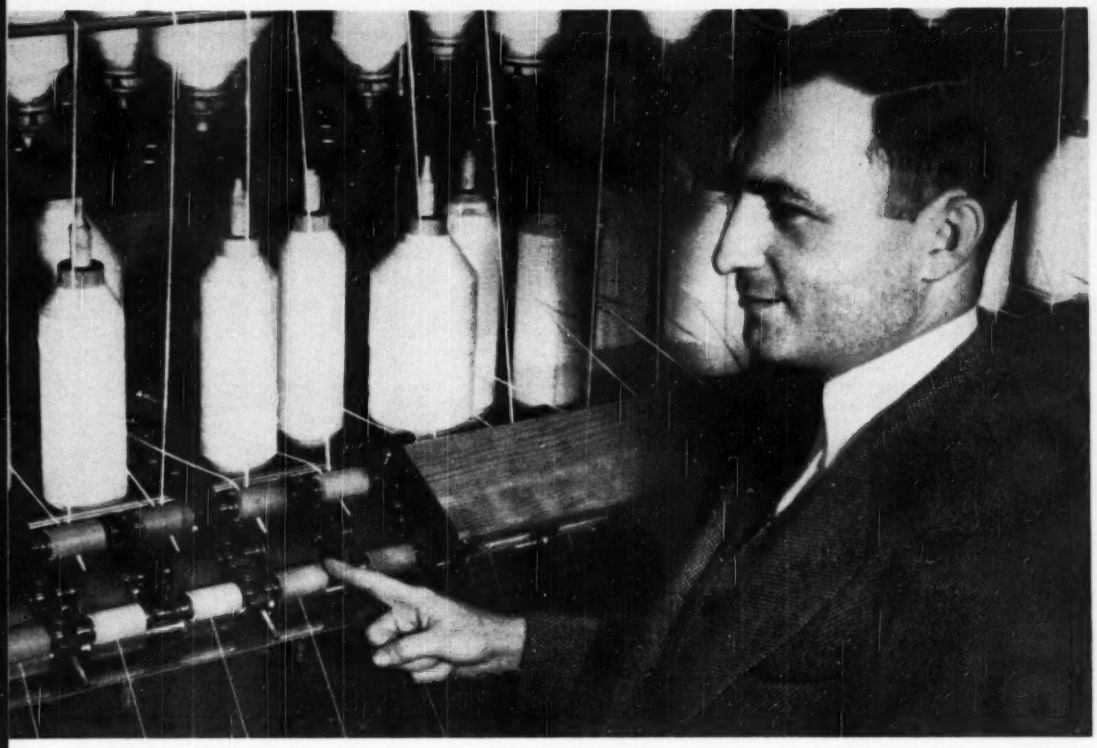
Whether you are spinning cotton, wool, or synthetics, Armstrong can supply you with a roll cover especially formulated to meet the requirements of different fibers.

Call your Armstrong representative today for a test installation of the Armstrong roll covering best suited to your operation or write to Armstrong Cork Company, Textile Products Department, 3606 Arch St., Lancaster, Pa. These cots are available for export.

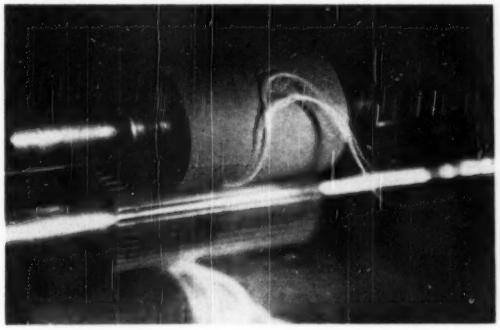
ARMSTRONG'S ACCOTEX COTS

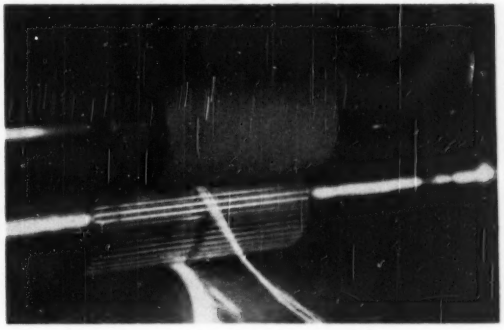
one of Armstrong's complete line of textile mill supplies

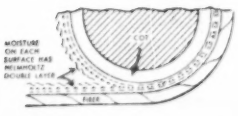
ACCOTEX APRONS **CORK COTS** **ROLL SHOP EQUIPMENT**



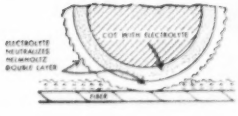
with Accotex Cots







THIS COT LAPS. Moisture layers on fiber and cot contain electric charges that attract fiber to cot. When pressed together, the two moisture layers have the effect of adhering fibers to cot and causing them to lap up.



THIS COT DOESN'T LAP. Electrolyte incorporated in patented Accotex rubber composition neutralizes electric charge in moisture layer on cot. This eliminates attraction of fiber to cot and prevents lapping up.

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Worsted Lubricant That ELIMINATES STATIC

Application: Top or Pin Drafter

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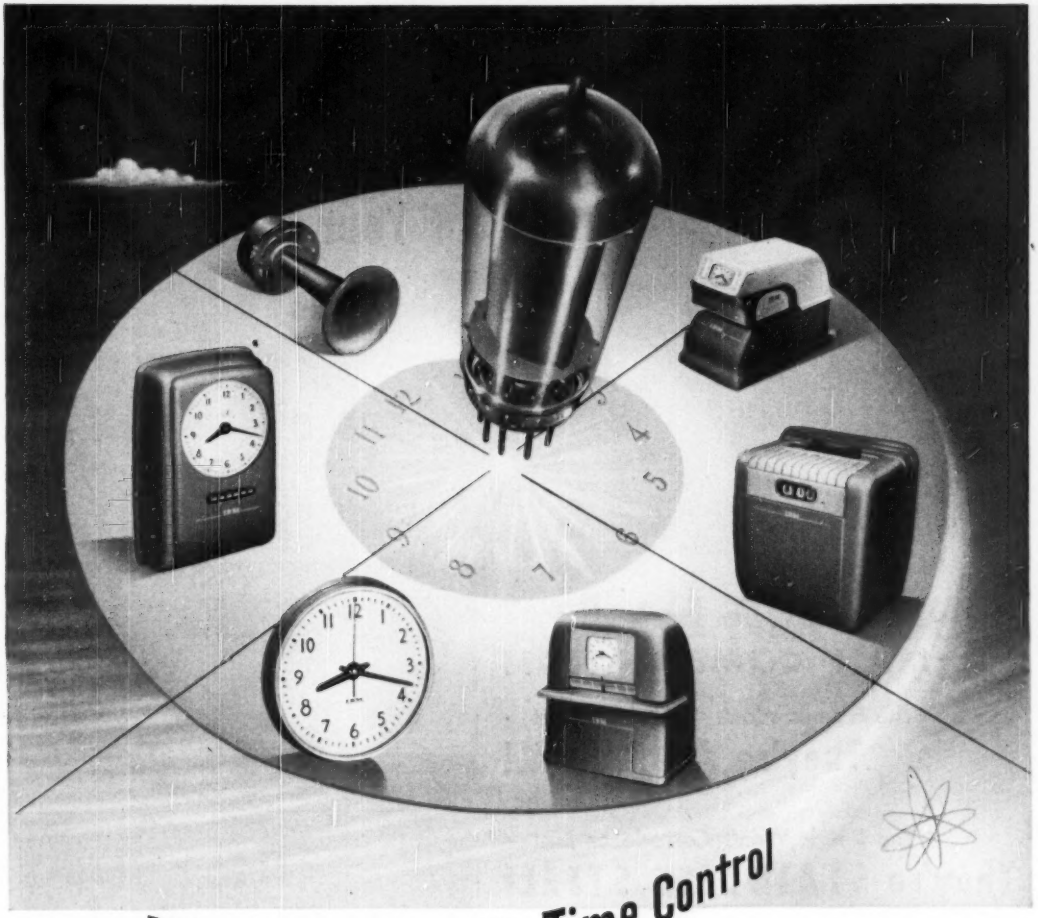

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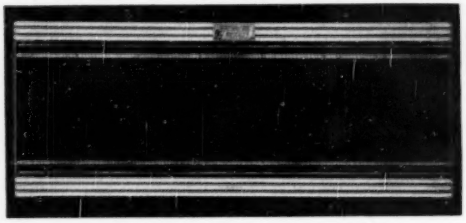
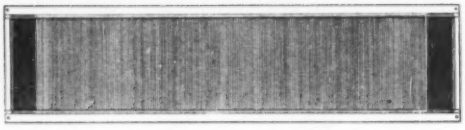
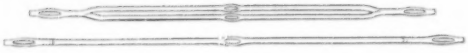


The Frames Won't Corrode or Rust —
They're ALUMINUM!



The Reeds Won't Corrode or Rust —
They're STAINLESS STEEL!



The Heddles Won't Corrode or Rust —
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Let's add up the many new and exclusive advantages of the Emmons Rust-Proof Harness Combination: No more rust or corrosion, extra frame rigidity with reduced distortion, free sliding heddles and greatly reduced heddle and yarn breakage. Heddles with a low coefficient of friction to aid in weaving and superior for cloth of fine construction, plus ease of cleaning. Reeds that suffer less from dent breakage and are easier to clean . . . and of course LONGER LIFE for ALL THREE!

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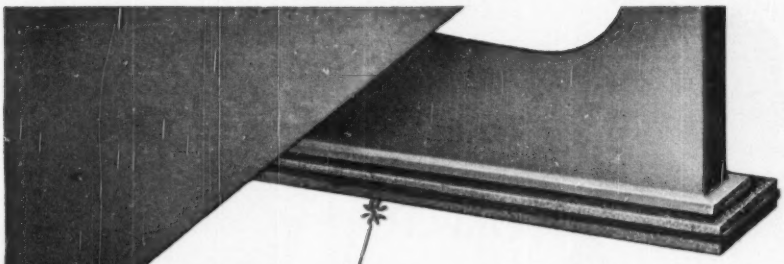

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Saco-Lowell opening machines, mounted on UNISORB at Anchor Rome Mills, Inc., Rome, Ga., without bolts or lag screws.

UNISORB-mounting . . . the *modern* way to anchor every kind of machine on every kind of floor . . . is the anchoring method that requires no bolts, no lag screws, none of the floor damage that goes with old-fashioned anchoring methods.

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UNISORB saves installation time and money.

UNISORB mounting lasts for many years — requires no maintenance.

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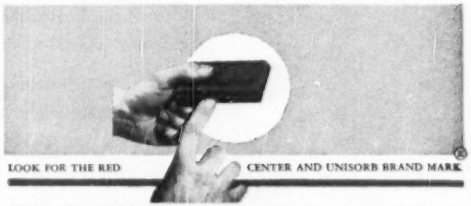

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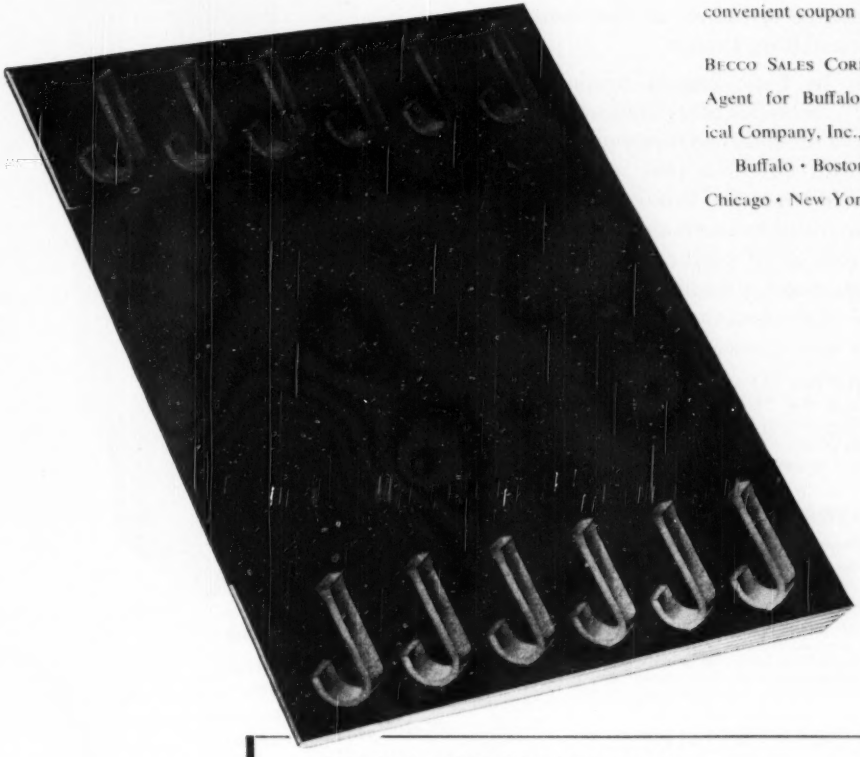

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Fig. 1640
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Ask for Circular No. 561 which illustrates the numerous patterns in which the "KING-CLIP" is available—iron body trim with bronze and various alloys, and all-iron . . . for a wide variety of services. You'll find one or more types which you can use to profitable advantage.

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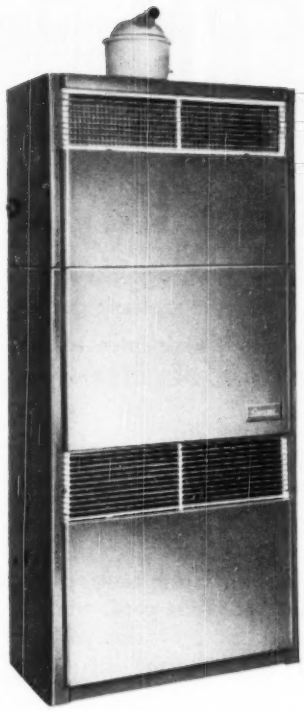

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"We have no trouble whatever in maintaining a condition of 70 degrees DB coincident with 50% RH. The installation is giving entirely satisfactory results . . . takes up a minimum of space." Dwight Manufacturing Co.

The Carrier Self-Contained Laboratory Air Conditioner occupies only 6 square feet of floor area. Installation is quick and easy. The unit may be moved at a minimum of expense. For more information ask for Booklet 50T85. Write Carrier Corporation, Syracuse 1, New York.

Carrier AIR CONDITIONING • REFRIGERATION • INDUSTRIAL HEATING

Photo courtesy Celanese Corporation of America. Yarn content: Warp — Celanese acetate rayon dull filament; Filling — Celanese acetate rayon bright staple.

A DURABLE GAS-FADING INHIBITOR

ARIPERM P M

Gives fabrics composed partially or wholly of

Acetate Rayon

— lasting protection against fading from atmospheric gases

— with excellent resistance to *WASHING AND DRY CLEANING*

Recommended for dyeing Light Shades, Pastels & Tints as well as medium and heavy shades.

With Ariperm P M there is no appreciable yellowing effect on white goods when exposed in the gas chamber — relatively little effect on light fastness of the color.

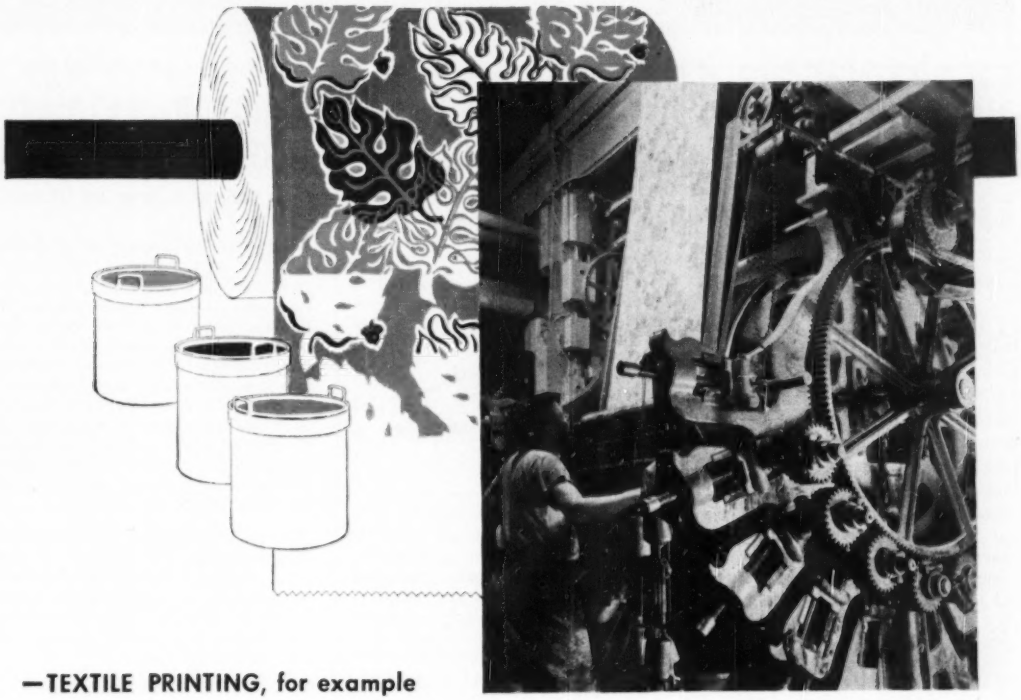
Simple application in scouring or directly in the dye bath.

Write for Technical Service Bulletin #201-121.1

Arkansas Co. INC.

NEWARK, NEW JERSEY

Gulf Process and Technical Oils
help solve many special problems in industry



—TEXTILE PRINTING, for example

A large Southern textile finishing plant sought to improve the quality of its printed cloth by increasing color penetration. The answer: one of Gulf's Process Oils.

This special oil helps spread the colors evenly into and around the minute cotton fibres. Its use at this plant has resulted in improved color effects in the cloth, greater uniformity, and lower costs.

Among other widely used Gulf Process and Technical Oils are transformer oils, which have excellent dielectric properties; leather oils, which keep leather pliable by replacing natural oils removed during tanning; glass mold oils, which prevent sticking of glassware in the molds; concrete form oils, which improve the finish of concrete and facilitate the removal of forms — to name only a few.

Gulf makes available more than 400 quality oils and greases that are helping plant operating men make important dollar savings. Make sure your plant is getting the advantage of recent developments in petroleum science. Call in a Gulf Lubrication Engineer today.

Gulf Oil Corporation · Gulf Refining Company

GULF BUILDING, PITTSBURGH, PA.

Sales Offices - Warehouses

Located in principal cities and towns throughout Gulf's marketing territory

Industry cuts costs with Gulf Quality Oils and Greases

GULF INDUSTRIAL LUBRICATION

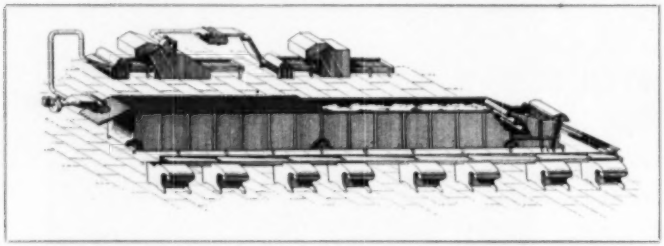
TEXTILE MACHINERY and

PUBLISHED BI-MONTHLY FOR TEXTILE MILL EXECUTIVES AND OPERATING PERSONNEL BY PROCTOR & SCHWARTZ, INC.

• JUNE • 1950 •

"JOB ENGINEERED" AUTOMATIC BLENDING and STOCK CONVEYING SYSTEMS

Applicable to All Types of Textile Mills



With the ever increasing amount of interest shown by all types of textile mills in blending—Proctor engineers have made great strides in the development of many automatic and semi-automatic systems for use in these mills.

These systems have ranged from the most simple—employing one picker, fed manually—up to full automatic systems with a series of pickers fed by automatic weighing feeds. The output needs, type of blending required and the degree of labor saving to be achieved, all enter into the recommendation made for any one plant.

A corollary development has been the introduction of many automatic stock conveying systems. By means of these systems, many mills now have stock delivered where it is wanted, when it is wanted and in exactly the amount needed —entirely automatically.

The system illustrated shows a combination of equipment for taking various stocks from bales, opening and blending those stocks thoroughly, reblending over a roller distributor—which stores up sufficient blended stock to keep the cards supplied for two night shifts—and then, automatically depositing the stocks into card hoppers. The system employs two bale breakers, two pickers, two overhead condensers, a roller distributor over a blending box and a series of overlapping conveyors for automatically feeding stock to the hoppers. The entire system is controlled by electrical switches tied in with feeler mechanisms on the card hoppers. System shuts off when hoppers are filled and resumes operation as soon as any hopper needs stock.

Variations of any of the systems already in operation may be made to meet individual mill requirements. The results are always the same—great savings in labor and the complete elimination of guesswork so long considered a necessary evil in the textile mill. For information on how your blending and stock conveying may be mechanized, write to Proctor engineers today.

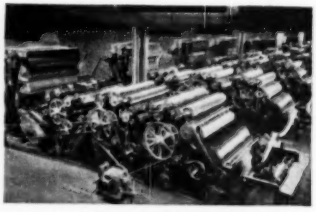
PROCTOR METALLIC WIRE WORSTED CARDS

Score Maximum in Output and Efficiency

In every installation where Proctor metallic wire worsted cards have replaced older cards—mill management has been astounded at the increase in output and efficiency. Usually one Proctor card replaces two older types—so great are the production possibilities of these cards. The difference in size is such that a new installation of Proctor cards to achieve the same level of production as the older cards, occupies only about $\frac{1}{3}$ of the floor space.

Not only is production usually doubled—but the quality of the card sliver is improved. Another significant advantage is that card waste is greatly reduced with a resultant increased yield of finished card sliver.

Proctor engineers are prepared to show you in accurate figures—independently gathered—how these cards are performing in leading mills . . . and then to translate this information into your individual requirements and show you how these cards can vastly improve the output and efficiency of your card room. Ask for details today.

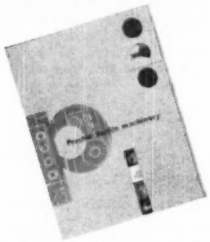


Did you see this EQUIPMENT FEATURED IN THE PROCTOR BOOTH AT THE AMERICAN TEXTILE MACHINERY EXHIBITION

DRYING EQUIPMENT *News*

NEW CATALOG ON TEXTILE MACHINERY *Now Available*

A new 52-page catalog which covers most of the standard units of Proctor textile machinery, is now available. Many recent Proctor developments in blending and stock conveying systems are included—as well as the more well known equipment. Distributed for the first time to visitors to the Atlantic City Textile Machinery show—this catalog is new and comprehensive. Write for your copy of Catalog #351 today.



PROCTOR ENGINEERS *Guarantee* FABRIC RESULTS IN NYLON SETTING

You are allowing nothing to chance when you set nylon fabrics in Proctor equipment—for the contract covering that equipment guarantees fabric results.

This is possible because in the design of the equipment, Proctor engineers leave nothing to chance. The equipment is designed to perform in accordance to specifications and it does!

If you are engaged in the production of nylon tricots, simplexes, laces, nets, sailcloths, industrial cloths, spuns or crepes—there is Proctor equipment to meet your needs and guarantee your finished results. Obtain the details today.

PROCTOR OVERFED PIN TENTERS PRODUCING AT THE RATE OF OVER 75,000,000 YARDS OF CLOTH ANNUALLY

A conservative estimate recently set 75,000,000 yards annually as the rate at which cloth is being processed in Proctor overfed pin tenter installations throughout North and South America.

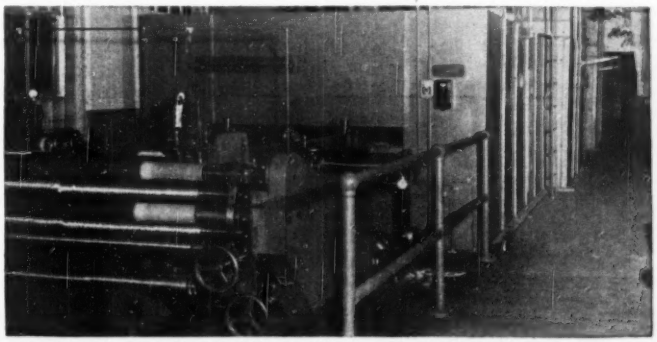
With this demonstrated experience in commercial operation, Proctor & Schwartz now offers complete pin tenter finishing to meet individual mill requirements. Proctor pin tenters may be of the vertical type (Dalglish)—or of the horizontal type which Proctor & Schwartz are making available in cooperation with Winsor & Jerauld.

Cloth guiding may be done either with the standard Dalglish hydraulic guider with a high speed overfeeding gear, which is proving out so effectively in these commercial installations—or the improved hydraulic guider with high speed overfeeding.

Whatever form is taken by the details of the machine's design—the Proctor overfed pin tenter makes possible finishing with guaranteed fabric results. The drying system that is employed with these Proctor tenters provides a balanced, high speed means of drying, permitting fabrics to be handled up to 100 yards a minute.

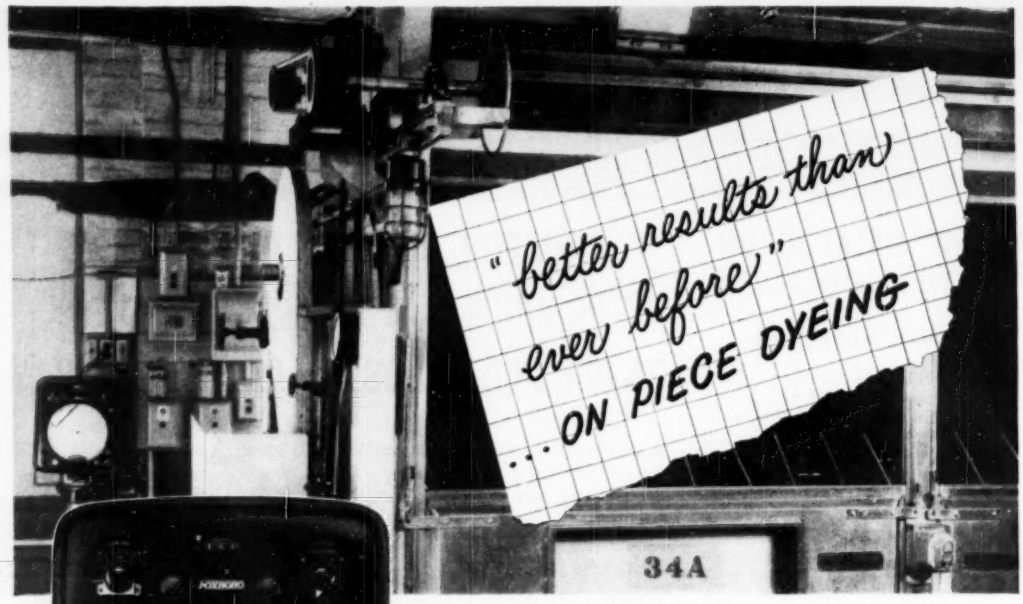
Because of the control that is possible with this system, results established on one fabric can be reproduced on the next run without question.

For complete information of modern Proctor overfed pin tenter finishing with guaranteed results —write today.

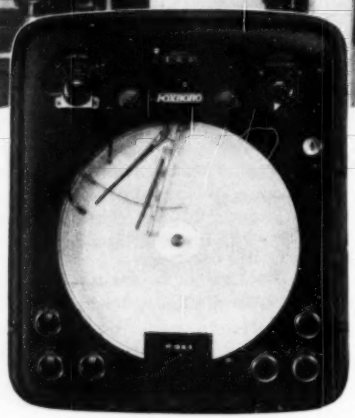


Much Proctor drying machinery and textile equipment is covered in full or in part by patents or patents pending.

Proctor & Schwartz, Inc. 610 TABOR ROAD *Philadelphia 20, Pa.*



Here's the automatic control set-up that gave the improved operation reported by the R. Wolfenden & Sons, Division of J. P. Stevens and Co., Inc., Attleboro, Mass. It's a new Foxboro M-40 *Camless* Time-Schedule Controller installed on a 10 ft. Riggs & Lombard piece dye kettle. Features set knob adjustment for any rate of rise from ½° to 7½°F. per minute.



M-40 CYCLELOG *CAMLESS* TIME-SCHEDULE CONTROLLER

1. preheats batch to uniform starting temperature and holds for preset warm-up period
2. increases temperature at *any desired rate* to pre-set holding temperature
3. maintains holding temperature for a pre-set period *after dye temperature is reached*
4. controls process shut-down at end of cycle
5. if desired, keeps batch at holding temperature for a pre-set overtime period after set time expires — then automatically shuts down

Colored lights indicate each step. Installation is easy, adjustment is easy, instrument is extremely accurate and flexible.

More uniform and exact shades . . . easy and accurate duplication of jobs . . . savings in over-all dyeing time . . . with much less attention by the operator . . . these are some of the *specific advantages* reported for Foxboro CycleLog Time-Schedule Control by the R. Wolfenden & Sons.

This important contribution to the art of textile dyeing is made possible by *the only camless* instrument for this type of service. The Foxboro CycleLog has no cams to cut — to select — to change — or to adjust!

The control schedule of the CycleLog is easily established in a few seconds by setting external control knobs. Widely different control schedules, available at turn of wrist . . . no cams to consider. Push button arrangement permits instant reset when repeating the cycle exactly. Standard M-40 Foxboro case houses complete mechanism.

If you are looking for a way to improve your dyeing operations . . . Foxboro CycleLog Control may be your answer. Send for Bulletin 438 providing complete descriptions. Or call your nearby Foxboro engineer. **The Foxboro Company, 18 Neponset Ave., Foxboro, Mass., U.S.A.**

FOXBORO
REG. U. S. PAT. OFF.

Process-Improving Controls for the TEXTILE INDUSTRY

Avisco-developed anti-static agent has excellent record in providing economical, efficient processing

Self-emulsifiable wax softens and lubricates yarns

Reports from the field indicate wide acceptance for Avcosol 100, the Avisco-developed anti-static lubricant and softener. Thoroughly tested in commercial use, this synthetic self-emulsifiable wax has an excellent record in providing economical and efficient processing with resultant lower costs and improved quality.

Used for all types of yarns dyed in skein, package or beam equipment

Avcosol 100 increases winding efficiency of skein-dyed yarns, especially fine-denier and low-twist yarns. Used on staple, it reduces fuzziness thus promoting better backwinding and eliminating snags and breaks. Its virtues as an anti-static agent are equally pronounced when used on Vinyon*, acetate, nylon or other yarns where static is a problem. In addition, Avcosol 100 is an excellent finish that reduces harshness and brittleness caused by dyeing or bleaching.

Knitters find it valuable to provide proper knitting lubrication and to soften their dyed yarns. They report that the process eliminates the need to wax or oil during backwinding. A more uniform stitch formation and a more desirable hand is also achieved.

Avcosol 100 applied by conventional wet-processing methods

Conventional methods of wet-processing are used to apply Avcosol 100. For dyed goods, it may be added to the dyebath or the last rinse, eliminating the need for additional processing. It can be used advantageously in pressure dyeing because the extremely small particle size of Avcosol 100 emulsions makes possible uniform penetration of dye packages or beams.

Avcosol 100 is supplied by Atlas Powder Company, Wilmington, Delaware, which manufactures it to Avisco specifications. Technical service and assistance in working out specific problems and establishing procedures for handling are available through the Textile Chemical Division, Textile Research Department at Marcus Hook, Pennsylvania. Working samples are available on request.

*T.M. of UCC

RAYON 20 YEARS AGO

NEW YORK, June, 1930—A U. S. Senator predicts that "Rayon is destined to become the greatest textile industry in the nation."

MEADVILLE, PA., June, 1930—The Viscose Company has started production of acetate rayon in its new plant here.

TOKYO, June 1930—Japanese exports of rayon have doubled in the last year.

MAKE USE OF *Avisco*® 4-PLY SERVICE

To encourage continued improvement in rayon fabrics, American Viscose Corporation conducts research and offers technical service in these fields:

1 FIBER RESEARCH
2 FABRIC DESIGN
3 FABRIC PRODUCTION
4 FABRIC FINISHING

AMERICAN VISCOSE CORPORATION

America's largest producer of rayon

Sales Offices: 350 Fifth Avenue, New York 1, N. Y.; Charlotte, N. C.; Cleveland, Ohio; Philadelphia, Pa.; Providence, R. I.

TEXTILE BANKING COMPANY

Inc.

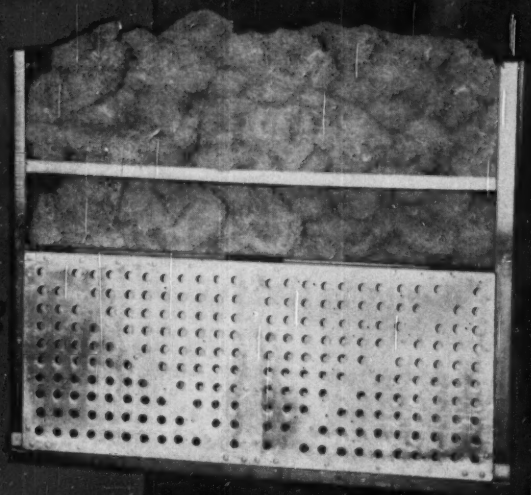
Factoring Service

Puts your sales on a cash basis
Strengthens your cash position
Relieves you of credit losses

55 MADISON AVENUE • NEW YORK

Carpet Mill switches to ALUMINUM TRUCKS

- light weight
- non-staining
- no red rust
- eliminate painting
- high strength
- non-splintering



Trucks of Alcoa Aluminum can improve your yarn handling operations as they did for a leading carpet manufacturer. They won't warp or splinter from the heat and sweltering humidity of conditioning ovens. Yarns are safe from ugly red-rust stains. Workers enjoy the effortless way these lighter trucks push—both loaded and empty. And your maintenance crews will like the freedom from painting and repairs they afford.

You'd expect to pay much more for trucks of Alcoa Aluminum. But their price is competitive with wood and steel ones. For a list of manufacturers, mail the coupon below to: ALUMINUM COMPANY OF AMERICA, 1990F Gulf Building, Pittsburgh 19, Pennsylvania.

ALCOA
FIRST IN
ALUMINUM

Gentlemen:
Please send a list of manufacturers who are making textile trucks of Alcoa Aluminum.

Name_____
Title_____
Company_____
Address_____
City_____ State_____

WHAT *Management* SHOULD KNOW about FLOOR-MAINTENANCE MACHINES

The area of a floor, whether it is congested or open, the type of flooring and whether it is easy or hard to clean — these, among other factors, determine the floor-maintenance equipment. For most effectual, economical floor care, choose accordingly.

For large-area floors, a self-propelled combination scrubber-vac is the labor-saving answer. *Finnell's 213-P* applies the cleanser, scrubs, rinses if required, and picks up — all in *one* operation. Has a cleaning capacity up to 8,750 sq. ft. per hour! Vacuum performs quietly.

For buildings with floor areas ranging from 2,000 to 15,000 sq. ft., a *Finnell 418-P Self-Propelled Scrubber-Vac* is a wise choice. Reduces cleaning time approximately two-thirds! Has all the refinements of *Finnell's* larger combination machines. Handles *both* wet and dry work.

For floors in very small establishments, and as supplementary equipment for the specific care of small-area floors in larger buildings, a *713 Finnell* serves advantageously. This 13" all-purpose machine is just 6" high! Polishes, applies wax, wet- and dry-scrubs, light-sands, applies seal, steel-wools, and shampoos carpets.

For grease-caked floors, a dry-scrubber with powerful scarifying brushes affords the fastest cleaning method. *Finnell's 84-XR*, with its powerful scarifying brushes, cleans grease-caked floors in *one-tenth the time required when hand-spudding!*

For general use, average duty, substantial savings are effected with a *100 Series Finnell* — the machine that's *two sizes in one!* Low, trailer-type construction permits use beneath furnishings. Noiseless in performance. Three sizes: 13, 15, and 18" brush diameter.

For general use, heavy duty, with emphasis on polishing needs, choose a motor-weighted machine. A *600 Series Finnell* gives 8-way adaptability! . . . has *safety switch* on handle . . . *2-way speed reduction*, providing *extra* protection for motor and gears . . . is self-propelled . . . noiseless. Four sizes: 11, 15, 18, and 21" brush diameter.

Finnell makes floor-maintenance machines for every type of floor care . . . also a full line of *Cleansers, Sealers, Waxes, Steel-Wool Pads, Mop Trucks*, and other accessory equipment. For consultation, demonstration, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 1306 East St., Elkhart, Ind. Branch Offices in all principal cities of the United States and Canada.

FINNELL SYSTEM, INC.

Pioneers and Specialists in

FLOOR-MAINTENANCE EQUIPMENT AND SUPPLIES

BRANCHES IN ALL PRINCIPAL CITIES

Announcing . . .

New Listings

in the series of industry proved

AHCOVAT DYES

manufactured at Dighton, Mass.

C. I.	
Pr. 9	**AHCOVAT FLAVONE GC** *Paste*
Pr. 122	**AHCOVAT KHAKI 2G** *Double Paste*
1150	**AHCOVAT OLIVE R** *Double Paste*
Pr. 124	**AHCOVAT RUBINE R** *Paste*
1163	**AHCOVAT VIOLET BN** *Paste*
1105	**AHCOVAT BRILLIANT VIOLET 3B** *Paste*
. . .	**AHCOVAT NAVY BLUE BR** *Paste*
Pr. 293	**AHCOVAT OLIVE GREEN B** *Paste*

Quality *Integrity* *Service*

AHCO PRODUCTS

For complete technical information and shade card, call or write your nearest AHCO office.

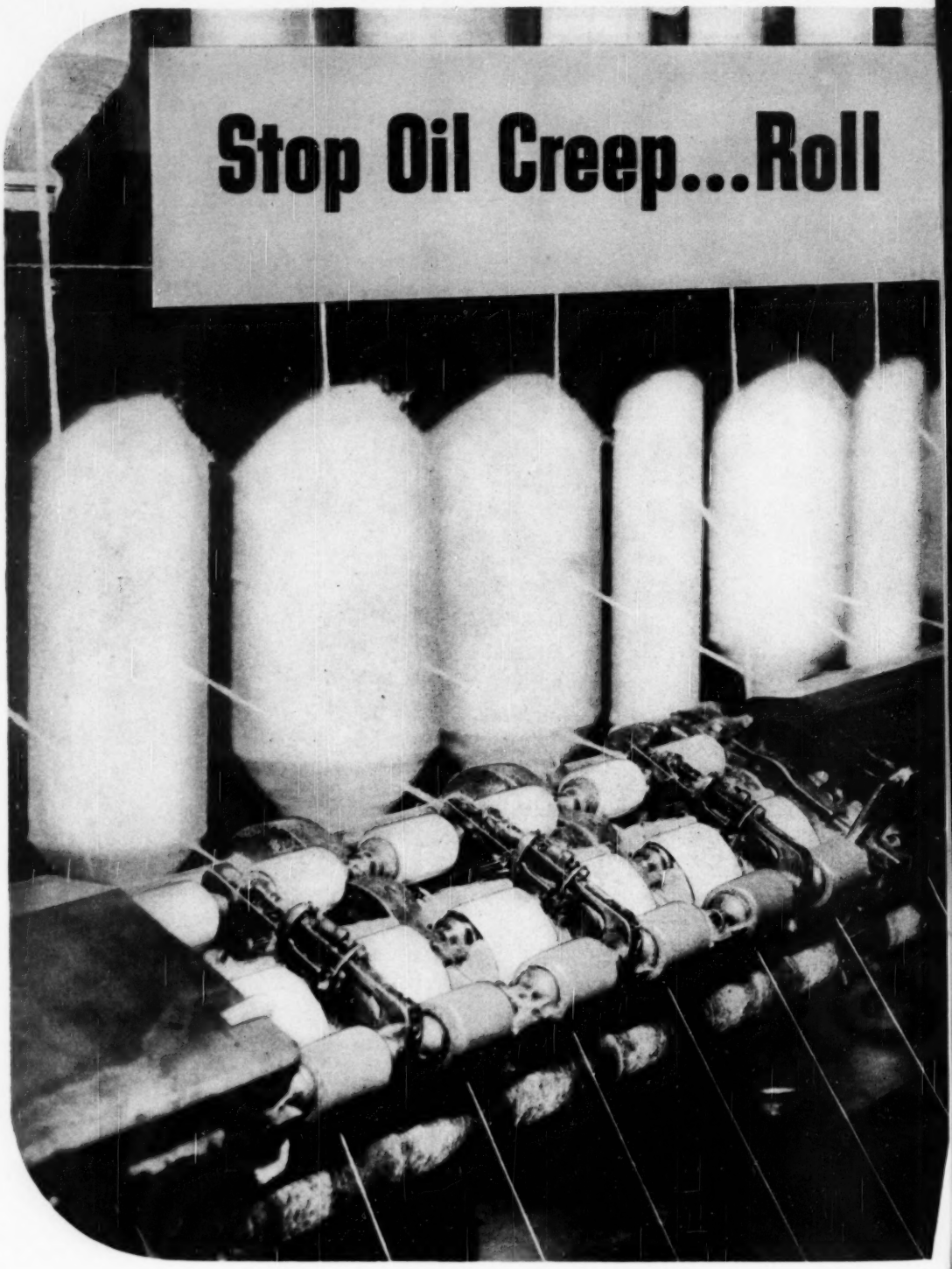
ARNOLD, HOFFMAN

PROVIDENCE, RHODE ISLAND

ARNOLD, HOFFMAN & CO. INCORPORATED • EST. 1815 • PROVIDENCE, RHODE ISLAND

Plants at Charlotte, N. C.; Cincinnati, Ohio; Dighton, Mass

Offices: Charlotte; Cincinnati; New York; Philadelphia; Providence


Stop Oil Creep...Roll

Damage...Yarn Spoilage

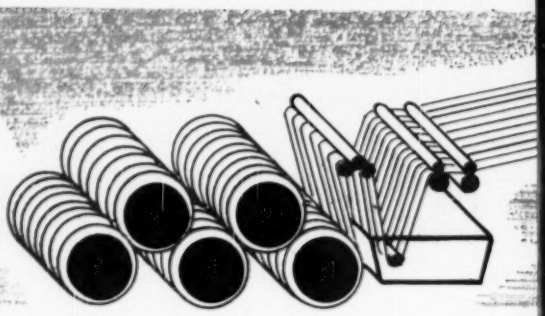
...use SINCLAIR NO-DRIP

Here's a fine lubricant especially made to stay in place!
When you apply Sinclair NO-DRIP to necks and yokes, it stays right there, allows rolls to turn smoothly, without drag. This provides even draft and saves wear. And, because NO-DRIP will not creep or drip, yarn and roll coverings are protected from spoilage.
So, for uniformly finer yarn production, fewer roll replacements, and for lower maintenance cost, use NO-DRIP.

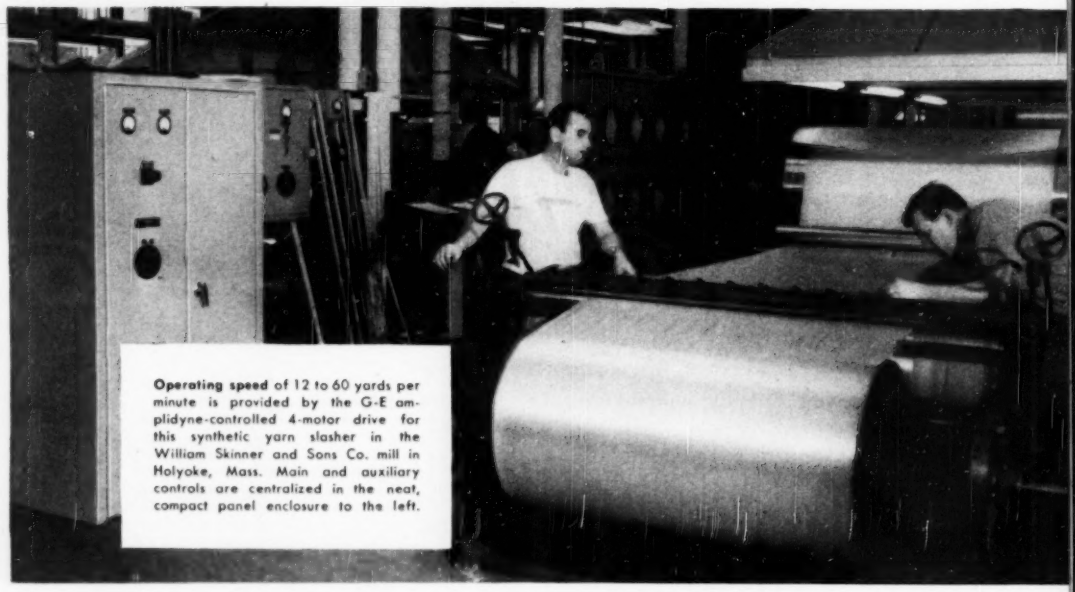
SINCLAIR TEXTILE LUBRICANTS

For full information or lubrication counsel write Sinclair Refining Company, 630 Fifth Avenue, New York City

FROM CREEL BEAMS...
TO WARP BEAM



JUST THE RIGHT TENSION



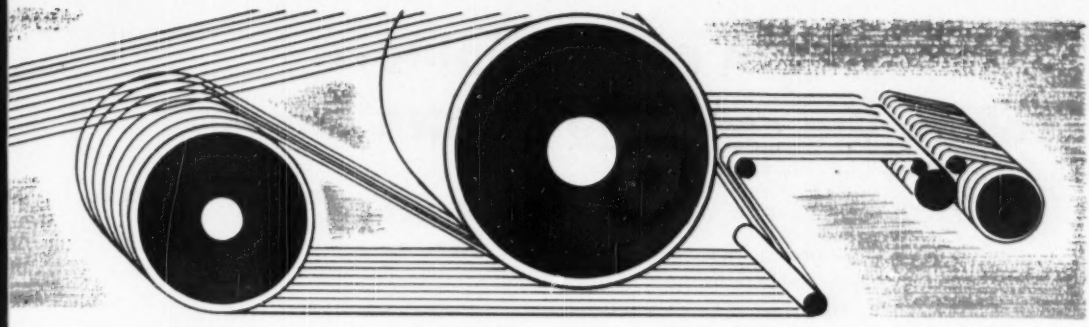
Operating speed of 12 to 60 yards per minute is provided by the G-E amplidyne-controlled 4-motor drive for this synthetic yarn slasher in the William Skinner and Sons Co. mill in Holyoke, Mass. Main and auxiliary controls are centralized in the neat, compact panel enclosure to the left.

Advantages? Just look at these!

- You can adjust tension and speed to suit any yarn.
- Once selected, desired tension is maintained automatically throughout beam build-up.
- A simple rheostat adjustment keeps yarn tension low between size box and dryer.
- You can easily pre-set running and creeping speeds.
- Tension variations and yarn damage are prevented by the drive's exceptionally smooth acceleration and smooth, fast deceleration.
- You can easily tie-in automatic moisture controllers to the drive, if desired.
- All main control equipment is centralized in one control panel, with remote operating controls located within easy reach at the slasher.
- You eliminate the need to maintain line shafting, mechanical speed changers, and slip clutches.

GENERAL ELECTRIC

634-C



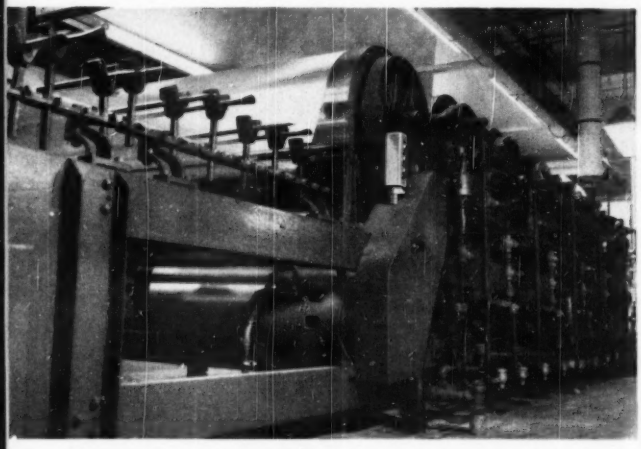
-held automatically!

With a G-E MULTI-MOTOR SLASHER DRIVE you get uniform, high-yardage warps, fewer ends down at the loom, higher weave-room efficiency!

Here's the modern way to the better-quality warps you need for today's higher weaving speeds—a General Electric multi-motor slasher drive with amplidyne control. It provides *automatically* the tension you want for most efficient slasher operation, minimizes dependence on "feel" and "guesswork." That means you all but eliminate broken warp yarns, soft spots in the beam, and irregularities in yarn tension. Result: stepped-up efficiency in your weave shed!

With this G-E drive, a uniformly low tension maintains elasticity in the yarn while it passes through size tank and drying cylinders. At the beam, tension is automatically increased to the value you select to produce maximum yardage warps.

Planning to modernize? See your G-E textile-mill specialist. If it's a new slasher installation that's on your mind, be sure to discuss this G-E drive with your machinery manufacturer. For more data on G-E slasher drives, write for Bulletin GEA-5259. *Apparatus Department, General Electric Company, Schenectady 5, N. Y.*



As seen from the windup end, one of four G-E 1½ hp gear motors is here shown driving the drying cylinders. The conveniently-placed remote-control push-button station above it permits operator to start and stop the drive from the drying section.

See "Textiles Unlimited"

It's General Electric's new full-color sound movie on how textile mills are modernizing. Chock full of ideas you can use on improving product quality and cutting costs, it covers such subjects as lighting, air conditioning, power distribution, machine drives, quality control, new processing methods, and many others. Ask your G-E representative to arrange a showing of this More Power to America production for your organization.

GE DRIVE SYSTEMS FOR TEXTILE MILLS

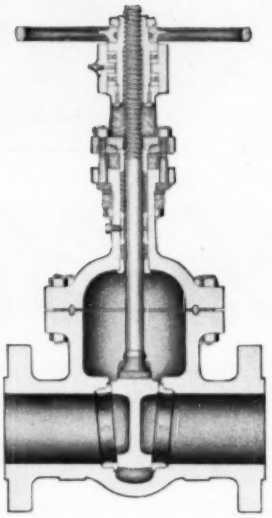
For the best in power piping...
Look to the complete CRANE line

STEEL VALVES FOR GENERAL STEAM SERVICES

You can count on Crane Cast Steel Wedge Gate Valves for dependable performance under the most severe service conditions. Straight-through ports minimize turbulence, erosion and resistance to flow. Long, close-fitting disc guides assure tight seating.

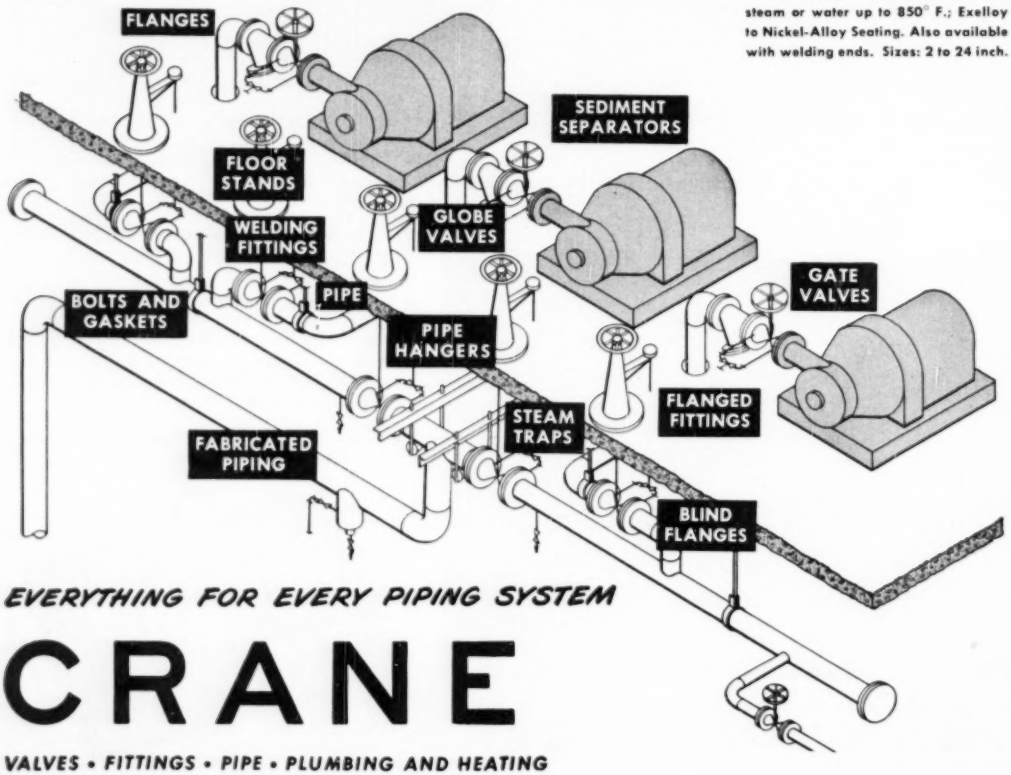
Strong tee-head disc-stem connection, easily lubricated yoke bushing, and ample bearings provide smooth operation. Made of Carbon or Alloy Steel suitably trimmed for pressures and temperatures up to 2500 pounds at 1000° F. Available with flanged, screwed, or welding ends. See your new No. 49 Crane Catalog.

CRANE CO., 836 S. Michigan Ave., Chicago 5, Ill.
Branches and Wholesalers Serving All Industrial Areas



No. 76XR, 600-Pound Steel Gate. For steam or water up to 850° F.; Exelloy to Nickel-Alloy Seating. Also available with welding ends. Sizes: 2 to 24 inch.

THIS STEAM TURBINE PIPING INSTALLATION CAN BE 100% CRANE ON ONE PURCHASE ORDER

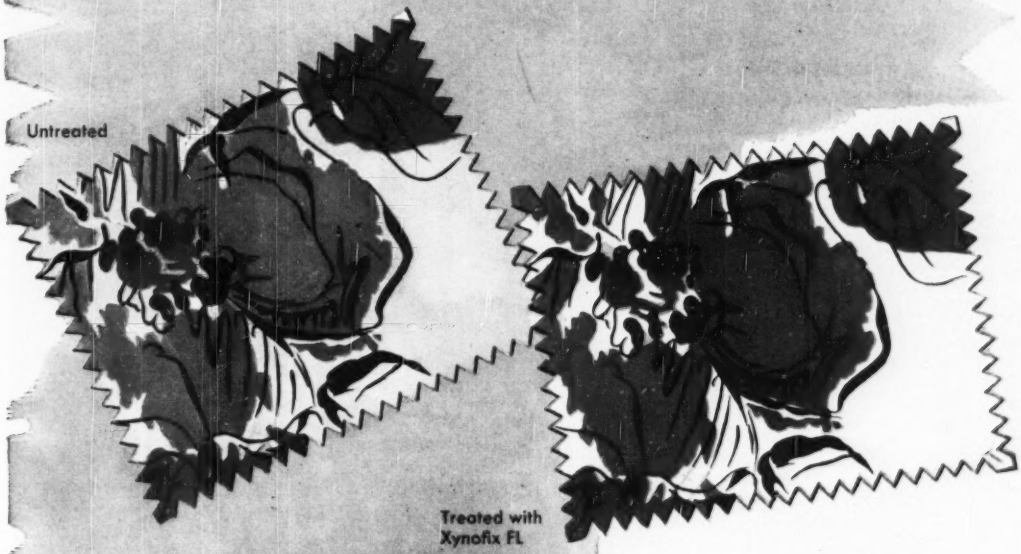


EVERYTHING FOR EVERY PIPING SYSTEM

CRANE

VALVES • FITTINGS • PIPE • PLUMBING AND HEATING

No More Bleeding on Your Prints



...when you use XYNOFIX FL

XYNOFIX FL in the last print wash will eliminate bleeding—even on colors that usually give you plenty of trouble.

Xynofix FL is also your insurance against streaky goods caused by drying delays.

It's easy to give Xynofix FL a test run. Ask us for details.

onyx CHEMICALS FOR DYEING • FINISHING • PRINTING

ONYX OIL & CHEMICAL COMPANY
TEXTILE DIVISION
JERSEY CITY 2, N. J.
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In Canada: Onyx Oil & Chemical Co., Ltd., Montreal, Toronto, St. Johns, Que. For Export: Onyx International, Jersey City 2, N. J.

Are you using the best starches for your purpose?*

*Full technical service, without obligation, is available to help you profit from the use of a starch "tailor-made" for your particular production problem.

In addition to technical service, we maintain continuing research in the field of starch chemistry, under the direction of the foremost research men in this field.

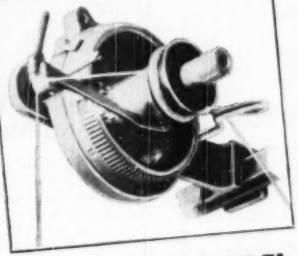
Basic research and technical service are two facilities maintained to serve you better. For uniform quality products . . . for a reliable source of supply . . . depend on Corn Products Refining Company.

CORN PRODUCTS REFINING COMPANY

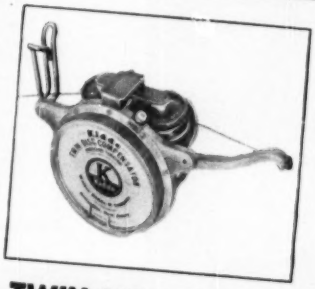
17 BATTERY PLACE • NEW YORK 4, NEW YORK

Tension Problems Bothering You?

SEE Kidde



STANDARD MODEL



TWIN DISC MODEL

WARP MODEL

SPECIALISTS IN TEXTILE TENSIONS

Want to do away with the variables of yarn tensioning? Kidde Tension Compensators are precision devices that can do it for you.

The Standard Model, specially designed for average speeds and tensions, has proved its worth—saved time and money for many large mills—over 20,000 have been installed in the last year alone.

The Twin Disc Model is built to handle high speeds and tender yarns efficiently and economically—passes knots without difficulty.

The Warp Model, small and inexpensive, is just the thing for warp beams. It keeps beam tension uniform, keeps yarns from becoming over-stressed, keeps warp beams from buckling.

Walter Kidde & Company, Inc.
690 Main Street, Belleville 9, N. J.

Kidde

Walter Kidde & Company, Inc.
690 Main Street, Belleville 9, N. J.

I am interested in controlling tension for _____ type yarn. I want to apply the tension at _____

Name.....

Address.....

City.....State.....

Vari-Pitch

AUTOMATIC SHEAVE

BEST BUY

1

Multiple Belts

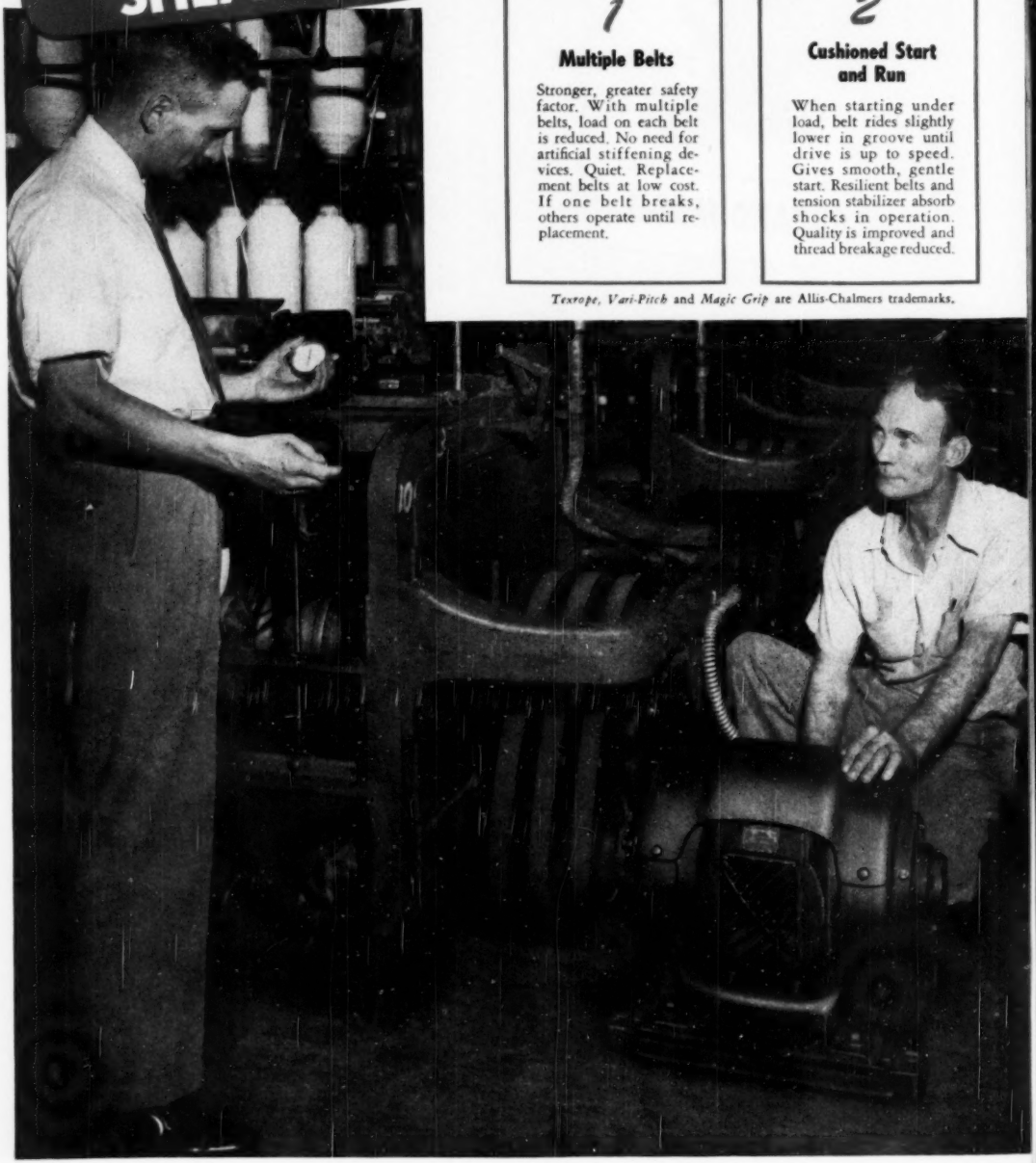
Stronger, greater safety factor. With multiple belts, load on each belt is reduced. No need for artificial stiffening devices. Quiet. Replacement belts at low cost. If one belt breaks, others operate until replacement.

2

Cushioned Start and Run

When starting under load, belt rides slightly lower in groove until drive is up to speed. Gives smooth, gentle start. Resilient belts and tension stabilizer absorb shocks in operation. Quality is improved and thread breakage reduced.

Texrope, Vari-Pitch and *Magic Grip* are Allis-Chalmers trademarks.



IN SPEED CONTROL

3

Full Horsepower and Speed Range

Vari-Pitch Automatic drives available from 1 to 40 hp. Rated horsepower is conservative for long belt life. Much greater capacity because of multiple belts. Speed range is 2 to 1. Top speed is 100% higher than low speed.

4

Simple Mechanism

All mechanism is inside one sheave. Standard motor can be used. Has few moving parts, all ruggedly designed and precision built. Can be installed by any mechanic without special tools or complicated wiring.

5

Low Cost

Low cost instant, stepless speed control. Only components required are standard motor, adjustable motor base, *Vari-Pitch* Automatic Sheave, companion sheave and belts. *Magic Grip* bushing on companion sheave reduces installation time.

6

Easy Control

You can change speed throughout the entire range with one hand while the machine is running. A simple ratchet wrench is all that is required. Extensions for remote control can easily be added.

These 6 big advantages of *Vari-Pitch* Automatic Drive GIVE YOU LOW COST, DEPENDABLE, EASY TO REGULATE VARIABLE SPEED

COMPARE THE *Vari-Pitch* AUTOMATIC DRIVE with any other speed changing device. Compare it for economical first cost . . . for low maintenance . . . for simplicity of both installation and operation . . . for plenty of capacity to handle any rated load . . . for quiet operation . . . for all the things that you want in a variable speed drive. On every count you will find that the *Vari-Pitch* Automatic drive will cut your costs and give you dependable service.

FULL LINE OF V-BELT DRIVE EQUIPMENT

You can get everything you need for V-belt drives . . . new and replacement *Texrope* standard and wide range belts; standard, wide range and variable speed sheaves; and speed changers from one reliable source. For details on the many Allis-Chalmers products that reduce costs in textile mills, see your nearest A-C Authorized Dealer or Sales Office.

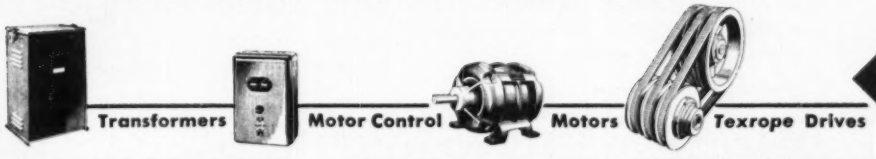
ALLIS-CHALMERS, 1054A SO. 70 ST.
MILWAUKEE, WIS.

Ask for Free Bulletins and Engineering Information

Allis-Chalmers Loom Motors	51B7111	Power Generating Equipment, Transformers, Circuit Breakers, Power Distribution Equipment	25B6150
Texrope Drives	20B6051		
Vari-Pitch Automatic Sheave	20B7223		
Dielectric Heater	15B6431		

COMPLETE SERVICE — from power line to machine

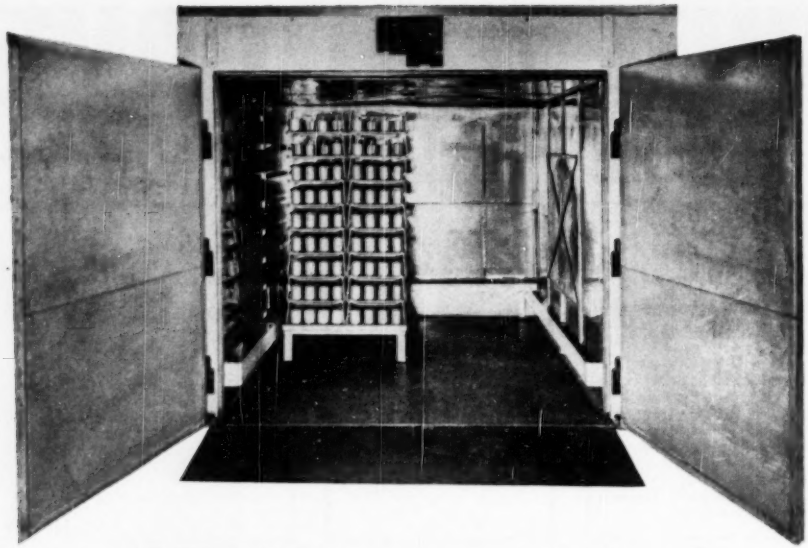
A-3047



A-C ALLIS-CHALMERS

ALLIS-CHALMERS

Originator of the Multiple V-Belt Drive for the Textile Industry



Having DRIP trouble?

This "H-W" yarn conditioner eliminates condensate dripping . . . and rusting

Condensate is a notorious trouble-maker . . . perhaps nowhere more than in a yarn conditioner.

But when drops are confined to the *walls*, they cannot fall upon the yarn, and the condensate does no damage.

In the "H-W" yarn conditioner pictured above — made by The Industrial Dryer Corporation of Stamford, Conn. — the ceiling is constantly maintained at a higher temperature than the other inside surfaces. Any condensate that may occur forms on the walls.

Rusting is eliminated and corrosion worries are reduced to a minimum with "H-W" conditioners. Walls and ceiling are made of rustproof, corrosion-resisting *Monel*®. The floor is a solid plate of Lukens Nickel-Clad Steel . . . also tough, rustproof and corrosion resistant.

Another important feature . . . control of temperature, humidity, and time of operation is fully automatic.

Because of these outstanding advantages, "H-W" yarn conditioners have found wide acceptance in the silk, rayon, woolen, and worsted industries.

And so, too, has *Monel!* For more than a quarter century this enduring Inco Nickel Alloy has been a preferred metal for textile equipment such as rolls, dye becks, vats, moistening boxes, slasher rolls, size cookers, piping and fastenings.

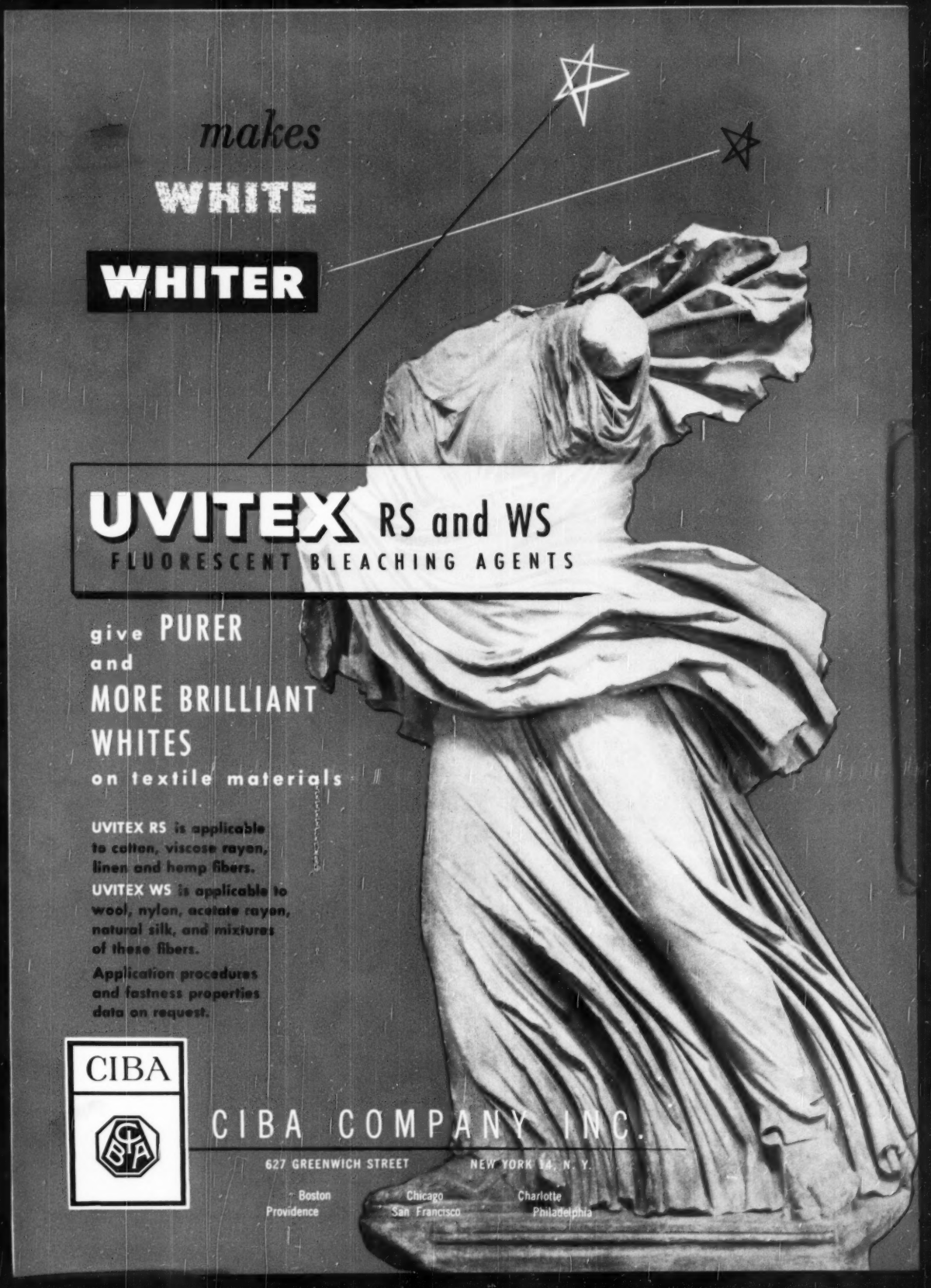
Monel is easy to fabricate and can be brazed, soldered, and welded. In Monel, welds are as corrosion-resistant as the alloy itself. Standard mill forms, fastenings, and wire cloth are available from your nearest Inco distributor.

Ask for your copy of Technical Bulletin T-5, *Engineering Properties of Monel*. It belongs in your reference files!

EMBLEM OF SERVICE
INCO

THE INTERNATIONAL NICKEL COMPANY, INC.
67 Wall Street, New York 5, N. Y.

MONEL . . . for Minimum Maintenance


makes
WHITE
WHITER
UVITEX RS and WS
FLUORESCENT BLEACHING AGENTS
give PURER
and
MORE BRILLIANT
WHITES
on textile materials
UVITEX RS is applicable to cotton, viscose rayon, linen and hemp fibers.
UVITEX WS is applicable to wool, nylon, acetate rayon, natural silk, and mixtures of these fibers.
Application procedures and fastness properties data on request.
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GUIDE LIFE INCREASED FROM 8 TO 108 WEEKS

ALSIMAG® QUILLER AND SIZING GUIDES

In one mill, former sizing guides had to be replaced every 4 to 8 weeks. AlSiMag Sizing Guides, now in use for more than two years, show no sign of wear. Breakage in cleaning was formerly a major problem. With AlSiMag guides, breakage has been virtually eliminated.

This is not an unusual report. In almost every instance, mills report that AlSiMag Guides show dramatic savings due to their exceptionally long life. Costs as low as 5% of former guide costs per pound of yarn produced are quite often reported to us.

Prove this in your own mill. Order AlSiMag Quiller Guides and Sizing Guides in test quantities. Run them side by side with the guides you have been using. Keep a record of results. That will show you how much YOU can save with AlSiMag Guides.

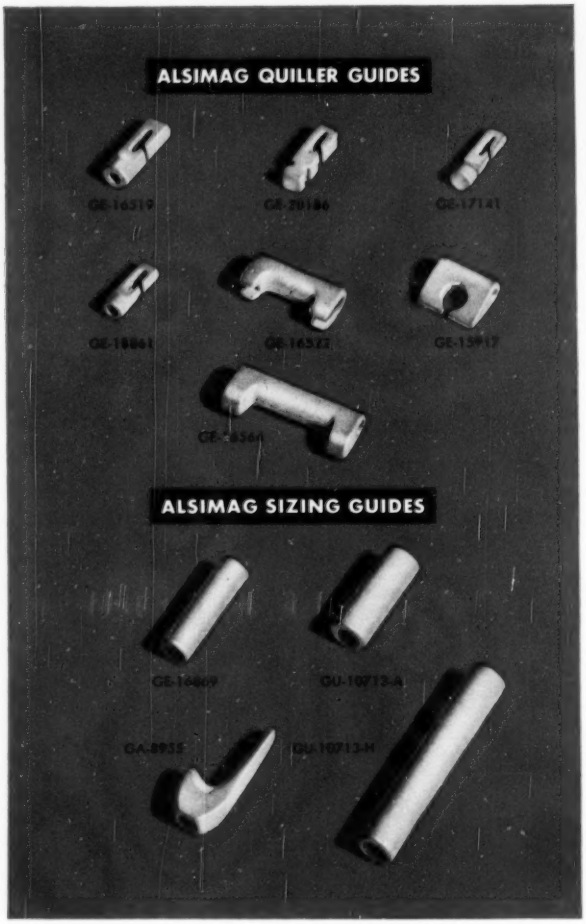
OPTIONAL FINISHES—AlSiMag Guides can be furnished in either satin finish or in highly polished finish. You may wish to test both finishes in your mill to find which finish performs best for you.

IF STATIC IS A PROBLEM—AlSiMag 192 Guides (cream color) are non-conductors of electricity. AlSiMag 193 Guides (steel gray) conduct electricity, otherwise are identical with 192 Guides. 193 Guides, properly grounded, bleed static electricity.

HARD, HOMOGENEOUS—AlSiMag guides are hard, homogeneous. Wear is very gradual, slowly exposes new surfaces of the same character as the original. There is no point of sudden failure, no chance of damaged yarn due to undetected guide failure.

BREAKAGE—If you are having high breakage losses on your present guides, ask for information on AlSiMag's newest developments in guides with higher resistance to impact.

ALSIMAG GUIDES ARE CUSTOM MADE FOR ANY REQUIREMENT



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AMERICAN LAVA CORPORATION

CHATTANOOGA 5, TENNESSEE

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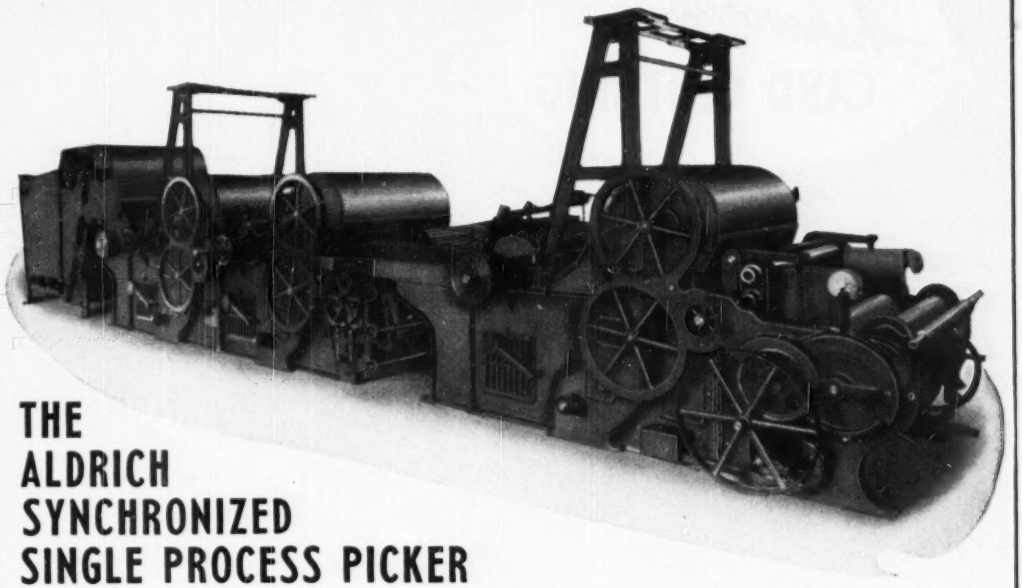
FOR MAKING EVENER CARD SLIVER



THE ALDRICH SYNCHRONIZED SINGLE PROCESS PICKER

A true single-process picker, in which the finisher section is fed with a smooth, well-formed lap from the breaker section, instead of with loose cotton from a gauge box or hopper feeder. The Aldrich Synchronizer controls the feed from the breaker section to deliver the lap exactly as required by the finisher.

This makes a lap which is not only quite even yard by yard, but unusually even in every direction throughout the lap. Such a lap will make a very even card sliver.

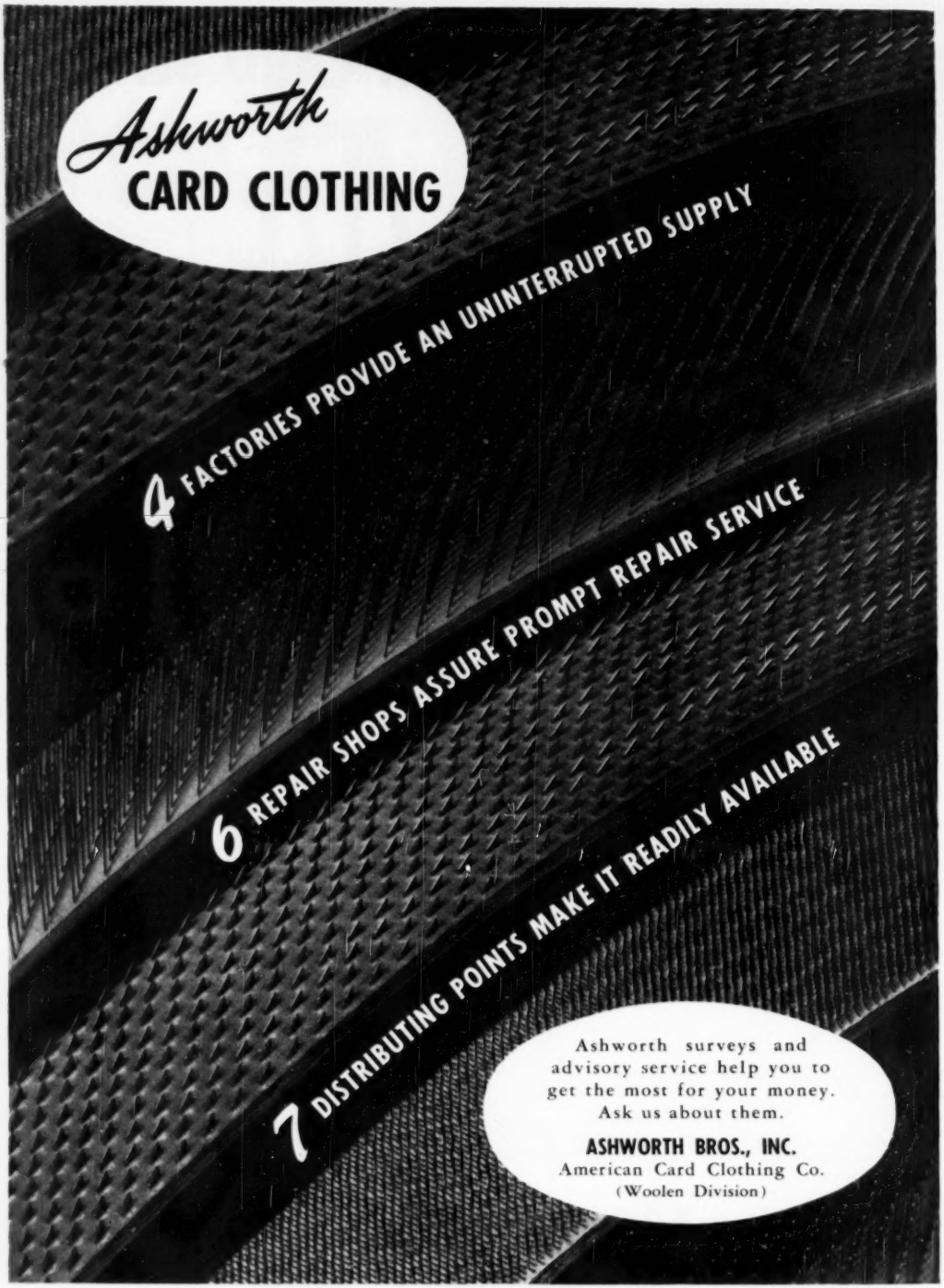
The feeder on the Aldrich picker is equipped throughout with permanently lubricated ball bearings, which never require attention.

The Aldrich picker has all possible parts in the evener mounted on ball bearings for extreme sensitivity.

The Aldrich picker is equipped with a new and improved, completely silent, sideshaft drive to the evener.

AldricH MachinE

Greenwood Works South Carolina


Ashworth
CARD CLOTHING
4 FACTORIES PROVIDE AN UNINTERRUPTED SUPPLY
6 REPAIR SHOPS ASSURE PROMPT REPAIR SERVICE
7 DISTRIBUTING POINTS MAKE IT READILY AVAILABLE
Ashworth surveys and advisory service help you to get the most for your money. Ask us about them.
ASHWORTH BROS., INC.
American Card Clothing Co.
(Woolen Division)

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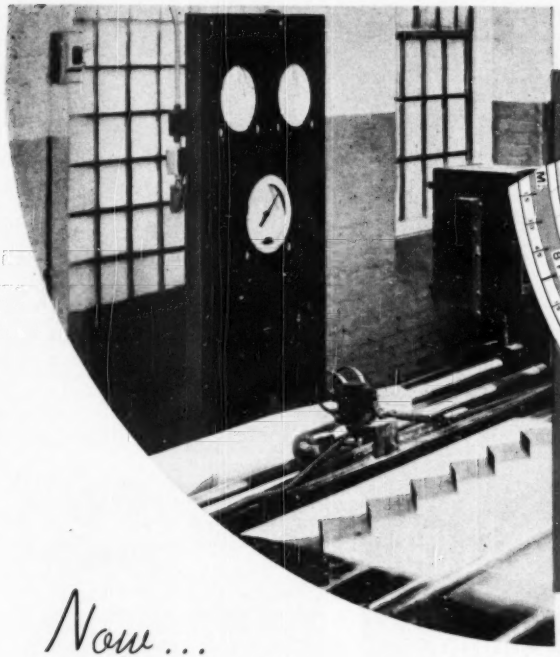
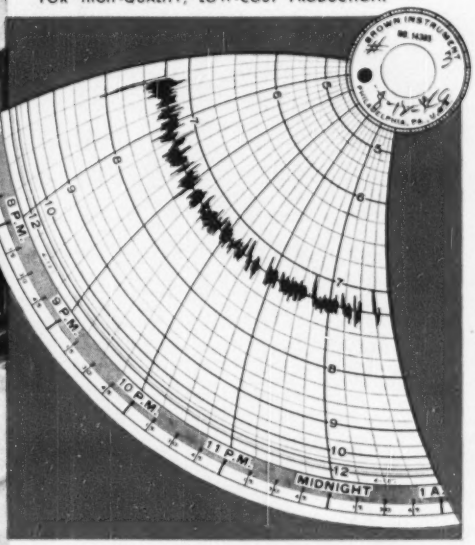
*Factory †Repair Shop ‡Distributing Point

BROWN SPECIALIZED INSTRUMENTATION FOR THE TEXTILE INDUSTRY IS SETTING NEW STANDARDS FOR HIGH-QUALITY, LOW-COST PRODUCTION!





Actual chart record . . . showing regain variations held within ⅛ of one percent.
(Reproduced approximately ½ size)

Now . . .

Precise Control of Regain at Constant Slasher Speed . . .

WITH THE NEW ELECTRONIC *Moist-O-Graph* CONTROLLER

THE Brown Constant Speed Control System for measurement and control of cotton warp regain is the kind of instrumentation that's been needed for a long time . . . the result of specialization in textile problems and the whole-hearted cooperation of progressive mill men.

This new system, built around the electronic *Moist-O-Graph* Controller, is a radical change in the approach to regain control. Based on a constant slasher speed, with precision control of cylinder and size temperature, it eliminates many of the complexities normally found in the common speed control systems . . . and produces results consistent with the chart record shown above. It is adaptable to any type of slasher drive.

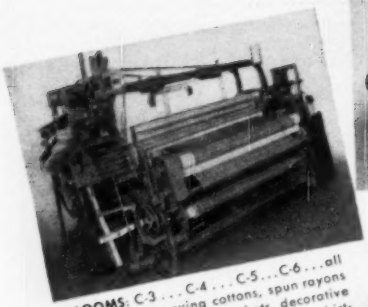
Check these outstanding advantages: Slasher speed is determined by the characteristics of the set being sized . . . operation at a fixed rate aids production planning . . . there is less possibility for mechanical breakage . . . constant speed lengthens equipment life.

For detailed information on this and other forms of pace-setting *Specialized Instrumentation*, call in your local Honeywell engineer . . . he is as near as your phone! Write for a copy of Data Sheet 8.1-35.

MINNEAPOLIS-HONEYWELL REGULATOR CO., *Industrial Division*, 4492 Wayne Avenue, Philadelphia 44, Pa. Offices in more than 80 principal cities of the United States, Canada and throughout the world.

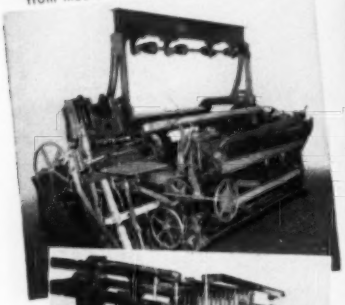
COMMERCIAL · RESIDENTIAL · INDUSTRIAL
WORLD'S LARGEST ORGANIZATION FOR ADVANCED INSTRUMENTATION AND CONTROL

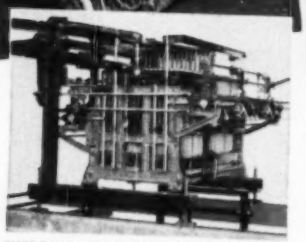
MINNEAPOLIS
Honeywell
BROWN INSTRUMENTS
FOR THE TEXTILE INDUSTRY



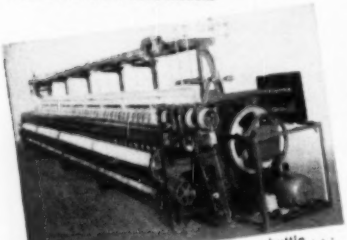
C LOOMS: C-3 . . . C-4 . . . C-5 . . . C-6 . . . all widths . . . for weaving cottons, spun rayons and blends . . . towels, blankets, decorative fabrics, bedspreads, handkerchiefs, shirtings, suitings, dress goods.

DUCK LOOMS: D-1 . . . D-2 . . . D-3 . . . D-4 . . . D-5 . . . D-7 . . . all widths . . . for weaving duck from medium weights to heaviest weights.

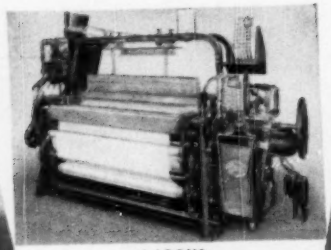




SHEDDING MECHANISMS: These machines give any loom a wider range of fabric-constructions . . . C&K *Jacquards*, single and double cylinder, 104 to 2608 hooks, permit *artistry unlimited* in everything from upholsteries to dress goods . . . also, C&K *Dobbies* . . . C&K *Head Motions*.



NARROW-FABRIC LOOMS: Circular shuttle . . . straight shuttle . . . single deck . . . double deck . . . all widths . . . for weaving tapes, elastic and non-elastic webbing, ribbons, labels, belting.

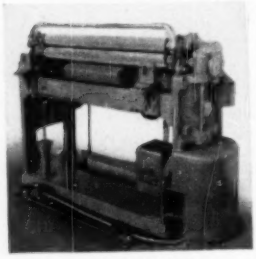


S LOOMS:
S-1 . . . S-3 . . . S-4 . . . S-6 . . . all widths . . . for weaving nylons, rayons, acetates, combinations and pure silks.

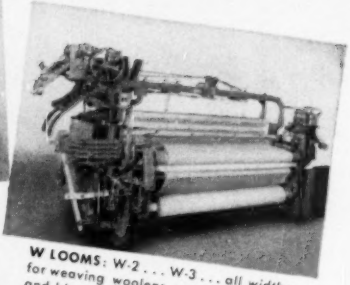
WORLD'S Longest Line of Looms... built by

A Loom for every C&K Woven Fabric

(Shown here are some representative types of the different families of Crompton & Knowles Looms)

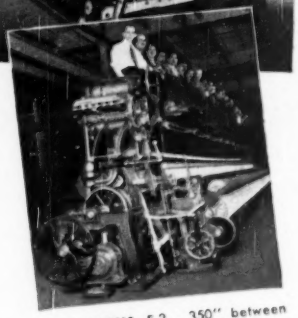


SETTING FRAMES:
This is one of the *special machines* designed and built by C&K. It winds 27", 36" or 54" spools (up to 3¾" maximum diameter) preparatory to weaving Axminster carpeting.

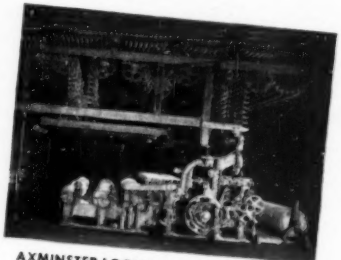


W LOOMS: W-2 . . . W-3 . . . all widths . . . for weaving woolens, worsteds, upholstery and blended fabrics.

PLUSH LOOMS: P-1 . . . for weaving all types of plush and frieze fabrics.



FELT LOOMS: F-2 . . . 350" between swords to 540" between swords . . . for weaving the widest fabrics woven — flat or endless paper-maker's felts.

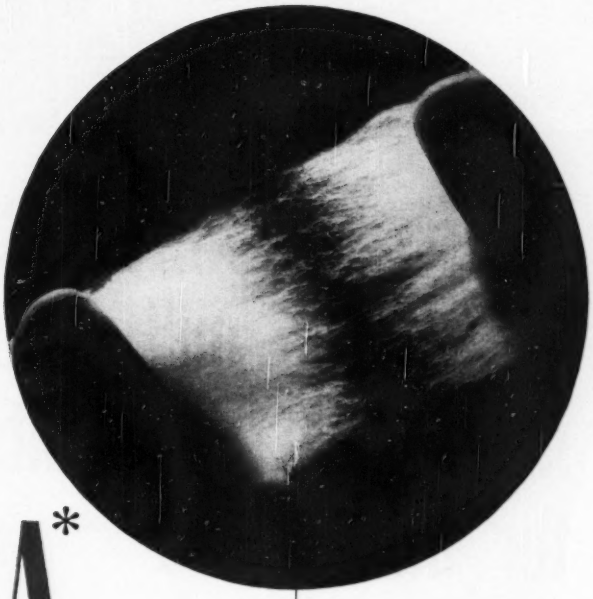


AXMINSTER LOOMS: Type A . . . Type B . . . highly specialized looms for weaving 27-inch to 15-foot carpet.

Crompton & Knowles Loom Works

WORCESTER 1, MASSACHUSETTS, U. S. A.

PHILADELPHIA, PA. • CHARLOTTE, N. C. • ALLENTOWN, PA. • CROMPTON & KNOWLES JACQUARD & SUPPLY CO., PAWTUCKET, R. I.



TECA* fiber offers

- *high wrinkle resistance*
- *ability to hold its press*
- *high soil resistance*
- *high shrinkage resistance*
- *fast drying*

THESE *five* selling points, *plus* the nationally recognized TECA trade-mark, are all sound reasons why your customers should prefer the new woven-with-TECA fabrics now available in men's and women's summer apparel.

A high percentage of TECA fiber in your fabric or garment is a proven sales aid. Specify it. Advertise it.

*TECA is an Eastman trade-mark. It identifies a short crimped fiber made by Eastman from cellulose acetate—a fiber otherwise known as estron or acetate rayon staple.

Tennessee Eastman Corporation

(SUBSIDIARY OF EASTMAN KODAK COMPANY)

KINGSPORT, TENNESSEE

LEADERSHIP WHERE IT COUNTS . . FOR YOU!

TEXTILE INDUSTRIES' larger U. S. mill circulation means better results for advertisers

. . . 86% of TEXTILE INDUSTRIES' big net paid goes to men actually in the mills—men with direct production and mill management responsibilities. In the reader classifications making up this most sales-productive group, T. I. leads all other textile journals, both percentage-wise and in total.

T. I. LEADS IN CIRCULATION IN HEAVIEST TEXTILE PRODUCING AREAS

In New England TEXTILE INDUSTRIES has 4,352 paid subscribers; 7,992 in the South Atlantic—a combination of 12,344 which tops all other national textile papers in these markets. Mills of these two areas operate 89% of the nation's spindles, 85% of the looms, and account for more than 80% of all U. S. textile mill purchases.

T. I. LEADS IN EDITORIAL HELPFULNESS TO PLANT OPERATION

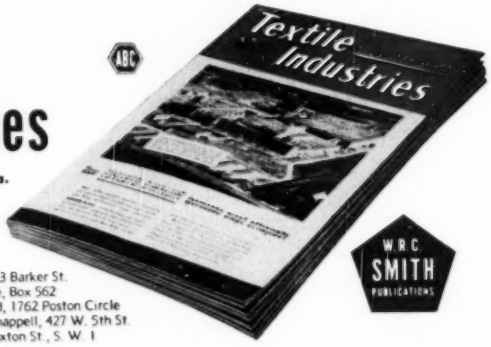
T. I. readers last year received 796 articles, in 15 classifications, on mill management and production—the equivalent of almost 10 up-to-date reference books on textile manufacturing. This helpful editorial program has made TEXTILE INDUSTRIES first in reader preference among men in the mills, according to the most recent survey.

T. I. LEADS IN PREFERENCE AMONG MILL EXECUTIVES

Survey was made in late 1949 to determine what publications were of most value in providing information helpful to mill operations. T. I. ranked first with total greater than next two publications combined.

Textile Industries

806 Peachtree Street, N. E., Atlanta 5, Ga.



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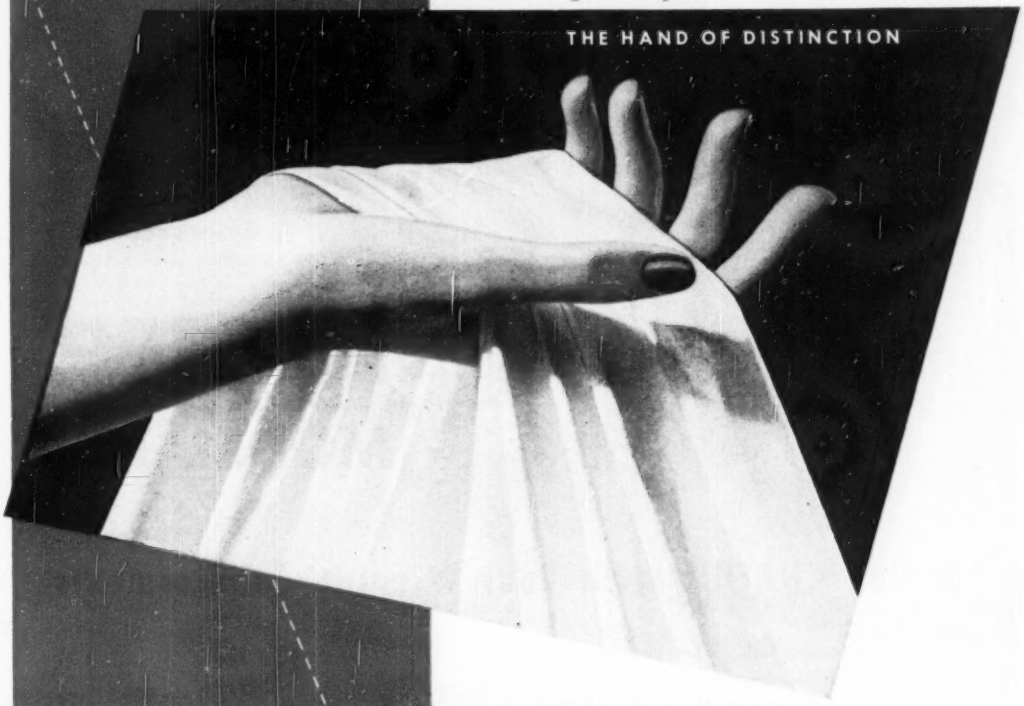
The Superior Finishing Oil for Fine Fabrics!



Soluble Luxolene D will give your fabrics . . .
Cottons, Rayons, Acetates . . .
the soft, smooth, silky *hand*
that distinguishes them above all others!
Soluble Luxolene D . . .
a sulphated synthetic ester . . .
has *all* the desirable characteristics of
Sulphated Olive Oil *plus*
unvarying uniformity—exceptional stability—
and resistance to odors, oxidation, scorching,
yellowing, discoloration.
Send for your sample.
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Technical Products Division

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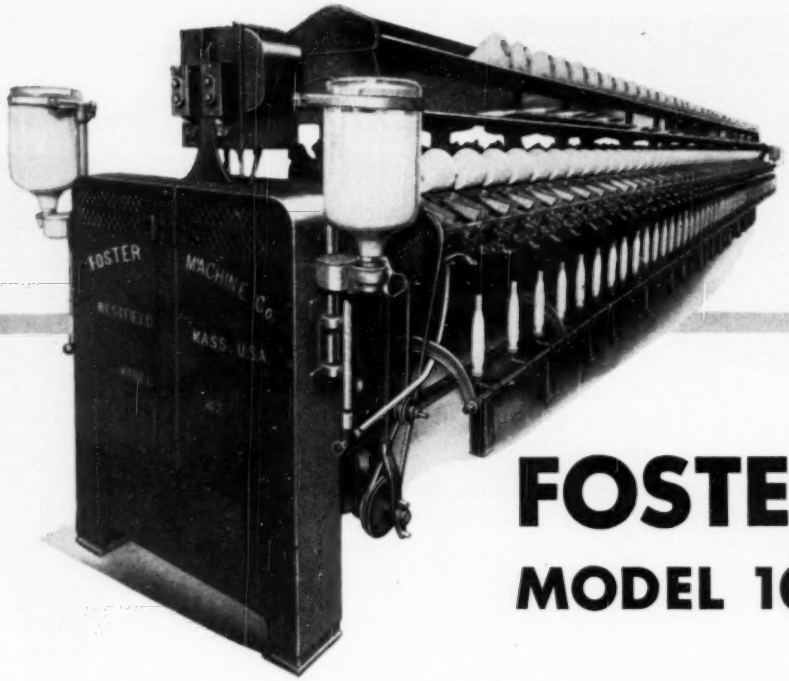
DREW PRODUCTS



FOSTER
MODEL 102

It Can CHANGE with Your Winding Requirements

No one can foresee today what his winding requirements will be tomorrow. However, he CAN obtain winding equipment which is FLEXIBLE enough to CHANGE with winding requirements, — the FOSTER MODEL 102.

This machine will wind any type or count of staple yarn. It can be readily adjusted to produce any cone taper commonly used and any angle of wind from 9° to 18°. It can also be equipped to wind knitting cones, warping cones, parallel tubes, dye packages (⅝" or large diameter tubes), or short traverse cheeses (3¼" or 2¼" traverse). It will wind dyed yarn even when damp (no jumping out of guides), also conditioned yarn (the machine is frequently equipped with a conditioning attachment). Yarn traverses up to 7" can be supplied.

Users of the Foster Model 102 also gain in winding efficiency, for this machine will wind twice as much yarn, at 1/3 less cost, as will obsolete machines.

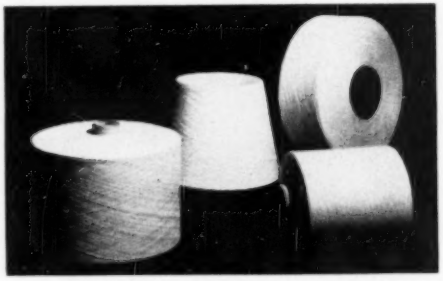
Bulletin A-95 on request

KNITTERS

Specify FOSTER - the ORIGINAL Open Wind Cone

By so doing you can also specify the taper, the angle of wind and the cone density which is best suited to your knitting requirements.

Modern slub catching attachment and other special devices on the Foster Model 102 assure a clean, uniformly high quality yarn and cones that are free of ribbon wind.

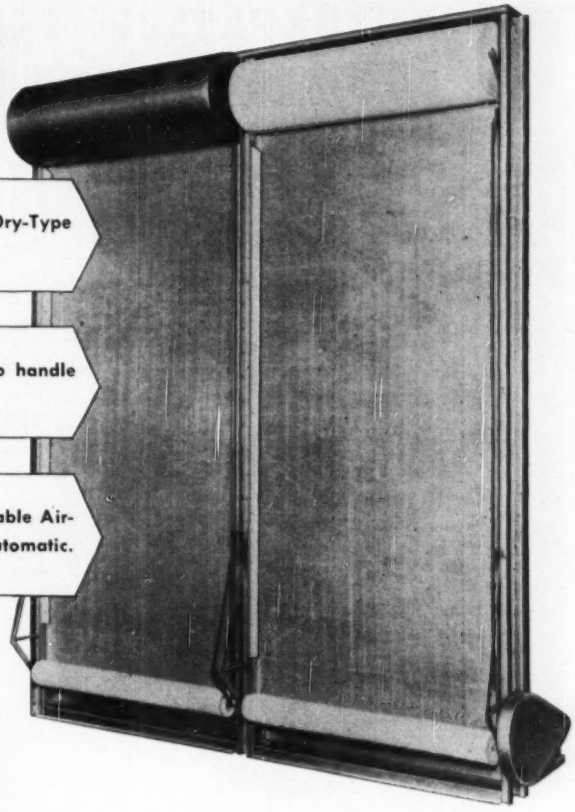


FOSTER MACHINE COMPANY

Westfield, Mass., U.S.A.

SOUTHERN OFFICE, JOHNSTON BLDG., CHARLOTTE, N. C.; CANADIAN REP., ROSS WHITEHEAD & CO., LTD., UNIVERSITY TOWER BLDG., 660 STE. CATHERINE ST., W., MONTREAL, QUE. EUROPEAN REP.: MUSCHAMP TAYLOR, LTD., MANCHESTER, ENG.

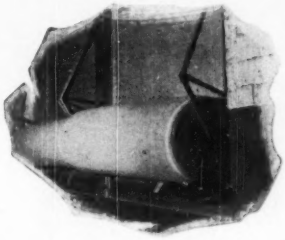
Auto·AIRMAT



IT'S NEW—An Automatic Self-Cleaning Dry-Type Filter—the first in the field.

IT'S PROVED—Mill tests prove ability to handle heavy lint concentrations.

IT'S PRACTICAL—Uses low cost, disposable Airmat paper as filter media. Operation entirely automatic.



Now you can really lick that lint problem and save money in the bargain. Auto·AIRMAT is designed to handle heavy lint concentrations in the return air from weaving and spinning rooms. And—this is important—it does the filtering job without the costly maintenance usually associated with this operation.

Auto·AIRMAT uses Airmat Paper as the filtering media. This paper is low in cost and makes disposing of used media more economical than reconditioning. The filter is made in vertical sections. The Airmat Paper from the roll at the top moves on a continuous screen down the face of the filter and is rerolled automatically at the bottom. The lint and dust collected are rolled up with the paper for later disposal.

The screen is rotated by an electric motor while the frequency of curtain movement and the distance it travels is controlled by a pressure switch. This switch is actuated by the resistance differential across the curtain and may be set at any maximum operating resistance.

Auto·AIRMAT is another "first" from AAF—the world's largest exclusive manufacturer of air filter equipment. Write today for Bulletin No. 234 giving complete data on this new automatic self-cleaning dry-type filter.

AAF

AIR FILTERS
AND ELECTRONIC PRECIPITATORS

AMERICAN AIR FILTER COMPANY, INC.
275 Central Avenue
Louisville 8, Kentucky

Please send me copy of AAF Bulletin No. 234 describing the new Auto·AIRMAT.

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Company_____

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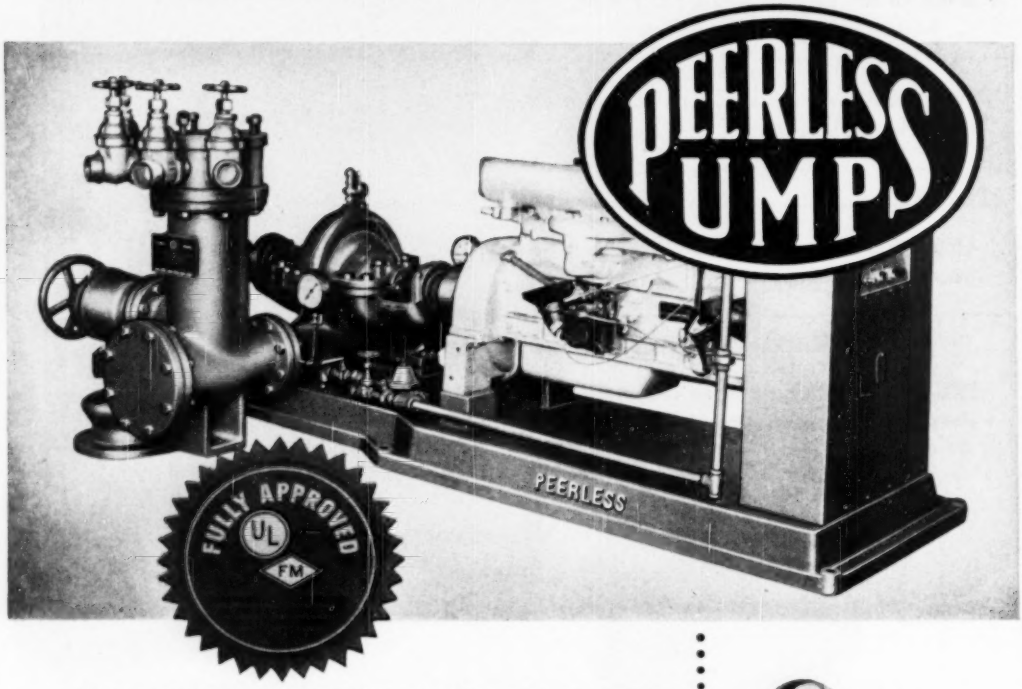
UNSURPASSED FIRE PROTECTION FOR COMMERCIAL AND INDUSTRIAL RISKS



UNDERWRITERS' APPROVED PEERLESS FIRE PUMPS

HORIZONTAL CENTRIFUGAL AND VERTICAL TURBINE TYPES—Peerless Underwriters' Approved Fire Pumps can be applied to practically every commercial and industrial risk requiring fire protection. They afford dependable, low cost protection, peak quality performance and unquestioned reliability that often will result in measurable savings in insurance cost.

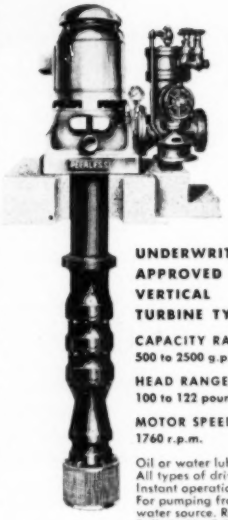
SINGLE AND MULTI-STAGE—Peerless Underwriters' Approved Fire Pumps are available in two types. The Type AF, shown above, is a single stage, double suction, horizontal centrifugal design, with a capacity range of from 500 to 2000 g.p.m., affording pressures, at rated capacities, from 40 to 150 lbs. and is available in 4", 5", 6" and 8" discharge sizes.

The Type TUF is a 2-stage pump available in 4", 5", 6" or 8" discharge sizes and furnishes from 500 to 1500 g.p.m., with a pressure range, at rated capacities, from 100 to 200 lbs.

ALL TYPES OF APPROVED DRIVES—Peerless approved fire pumps may be equipped with any type of drive: electric, steam turbine, gasoline or diesel engine. Auxiliary stand-by engine drives may be used in conjunction with turbine or motor drive to assure instant service even in the event of power failure.

SPRINKLER AND FOAM SYSTEMS—Peerless Underwriters' Approved Fire Pumps are ideal for application to liquid-foam type fire protection systems as well as to conventional sprinkler application; the former is especially desirable for solvent processing plant protection where the split-second control of fire hazards is a must.

NEW 24-PAGE BULLETIN ANSWERS ALL QUESTIONS ON UNDERWRITERS' FIRE PUMPS—Peerless Bulletin No. B-1500 completely describes and illustrates these unsurpassed and approved fire protection pumps. Write for your free copy today.



UNDERWRITERS' APPROVED VERTICAL TURBINE TYPES

CAPACITY RANGE: 500 to 2500 g.p.m.

HEAD RANGE: 100 to 122 pounds.

MOTOR SPEEDS: 1760 r.p.m.

Oil or water lubricated. All types of drives. Instant operation. For pumping from any water source. Request Bulletin No. B-152-1.

PEERLESS PUMPS fmc

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Factories: Los Angeles, California, and Indianapolis, Indiana
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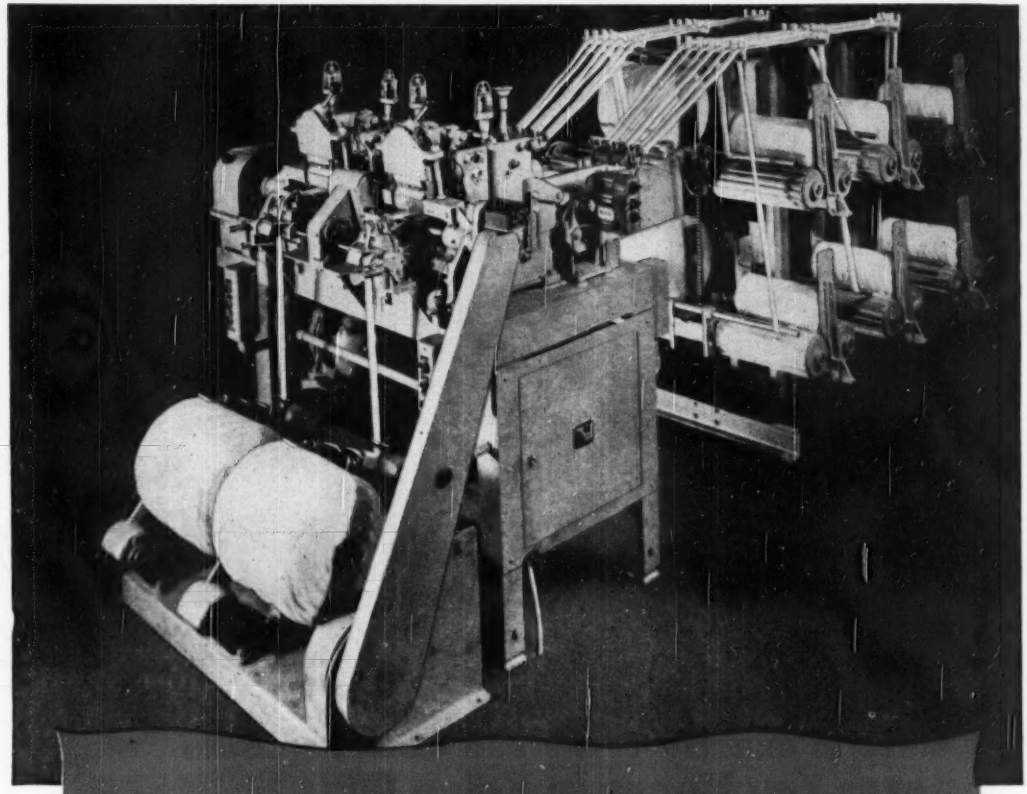

NEW BALLING HEAD UNIT EXTENDS USEFULNESS of Warner & Swasey Pin Drafters

TRADE MARK

- Winds tight, hard balls 14" x 15½" diameter. Presser foot principle eliminates drafting tendency in winding the sliver. Ball weighs 21 pounds requiring less than half the space needed for 15" x 36" can holding equivalent net weight.
- Enables combing mill to handle comb sliver direct, with one operation of Pin Drafting to ball form, in weights of two ounce top or less. Facilitates storage and conditioning of stock. Offers suitable shipping package.
- Can be applied for all three operations of Pin Drafting with double meche balls on final operation where desired for French Mills or American System using ball creel in back of roving frames.
- Balling Head units can be applied to all existing dual delivery Pin Drafters.

Our Field Engineer in your territory can give you complete information.

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WARNER & SWASEY
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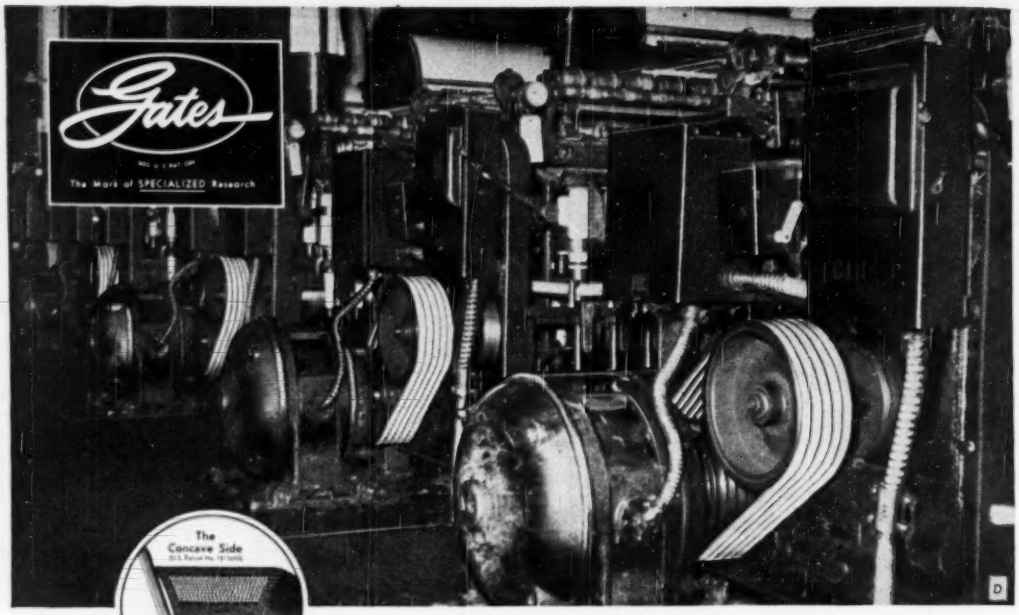
TEXTILE MACHINERY DIVISION

YOU CAN DO IT BETTER, FASTER, FOR LESS...WITH A WARNER & SWASEY



Thomaston Cotton Mills, Inc., Thomaston, Georgia, use Gates Vulco Ropes on the multiple V-Belt drives of the ply twisters shown in the photograph. In this application, the Gates Vulco Ropes have been averaging 31,200 hours of service—the equivalent of 13 years at 8 hours a day.

Here is exactly ***WHY*** the Concave Side Saves You Money in V-Belt Costs

When *any* V-belt bends in going around its pulley, it is forced to *change* its *shape*.

Naturally so, because the top of the belt is under tension and grows *narrower* while the body, under compression, *bulges out!*

This change of shape in a *straight-sided* V-Belt, is shown in figures 1 and 1-A—and you will note how the bulging sides press *unevenly* against the V-pulley.

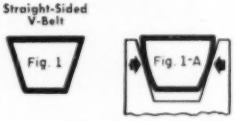
Now look at figures 2 and 2-A. There you see how this change of shape, due to bending, affects the belt that is built with the Concave Side—the Gates Vulco Rope. The precisely engineered Concave Side exactly corrects the side-bulge—and the bent belt *has a shape that exactly fits its sheave groove!*

Two distinct savings result. *First*—There is no side-bulge to cause uneven wear. The sides press *evenly* against the V pulley and therefore wear *uniformily*—resulting in *longer life!* Second—The *full width* of the sidewall grips the pulley—thus carrying heavier loads without slippage—and this *saves belts* and also saves *power!*

When you buy V-Belts, be sure you get the V-Belt with the Concave Sides... the Gates Vulco Rope!

What Happens When a V-Belt Bends

Straight-Sided V-Belt



How Straight Sided V Belt Bulges in Sheave-Groove. Sides Press **Unevenly** Against V-Pulley Causing **Extra Wear** at Point Shown By Arrows.

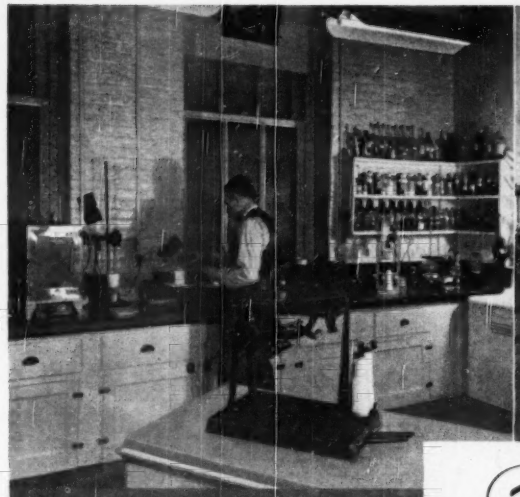
Gates Vulco Rope with Concave Side

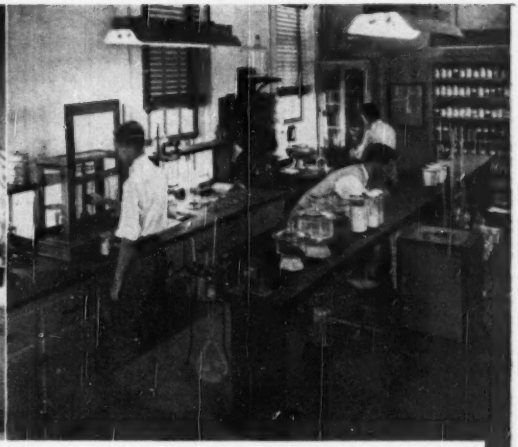
No Side Bulge. Precise Fit in Sheave Groove. Sides Press **Evenly** Against V-Pulley—Uniform Wear—Longer Life!

CS-505

THE GATES RUBBER COMPANY
DENVER, U.S.A.
The World's Largest Makers of V-Belts

GATES VULCO ROPE DRIVES
Engineering Offices and Jobber Stocks **IN ALL INDUSTRIAL CENTERS** of the U. S. and 71 Foreign Countries





USE THESE LABORATORIES TO IMPROVE YOUR TEXTILE PRODUCTS

AS we work with all sizing and finishing raw materials and chemicals, our technicians are familiar with the advantages and limitations of each type. This is a *"custom"* business. Our Laboratories therefore can function as a *department* of your company!

Look over the partial lists of operations and products on this page. Write us about *the improvements you want* in your sizing or finishing operations. We'll gladly lend you valuable aid in utilizing the advances of textile research in meeting today's production goals of, 1. High quality, 2. Low cost, 3. Improved output.

Paisley Scientific Textile Service

(LIQUID)

TEXTILE OILS, SIZING and FINISHING SPECIALTIES

THREE STAR OIL
Soaking rayon preparatory to throwing crepe.

NOX-FOME No. 2
Defoamer for textile sizing. A concentrate containing no added water.

A.R.N. No. 3
One-piece warp size for synthetic yarns, yielding smooth hand and requiring no desizing.

A.R.N. No. 8
Warp size for yarn dyed fabrics. Added to Stymer sizing formula, it prevents "stickers" and increases weaving efficiency. Prevents "frost".

M.N.T. CONCENTRATE
Catalytic softener for slashing of cotton warps, reducing time of preparation with lower shedding at the loom. Also used for nylon sizing.

RESILEX NC-8
Resin softener-penetrant, film-forming with animal glue for warp sizing of synthetic yarns.

PENETRA-SET
For conditioning of all yarn fibres.

Morningstar — Established 1851

(DRY PRODUCTS)

COTTON WARP SIZING
Aroostoocrat Potato Starch and Nestoco Potato Starch. Highest quality, uniformity, constant performance.

RAYON WARP SIZING
Reselvol, Styrezgum and Rezicose for every spun synthetic. Bone, Chrome and Hide Glues of uniform color and test.

PRINTING GUMS
Corn, Potato and Tapioca to meet specific requirements.

FINISHING
Dextrines and Thin Boiling Starches of every solubility or viscosity—from Corn, Potato or Tapioca.

THROWING
Synthogel Nos. 9 and 10 yield uniform pebble thru ease of removal in the boil-off.

CARPET & FELT SIZING
A wide range of Dextrines and Starches specially converted.

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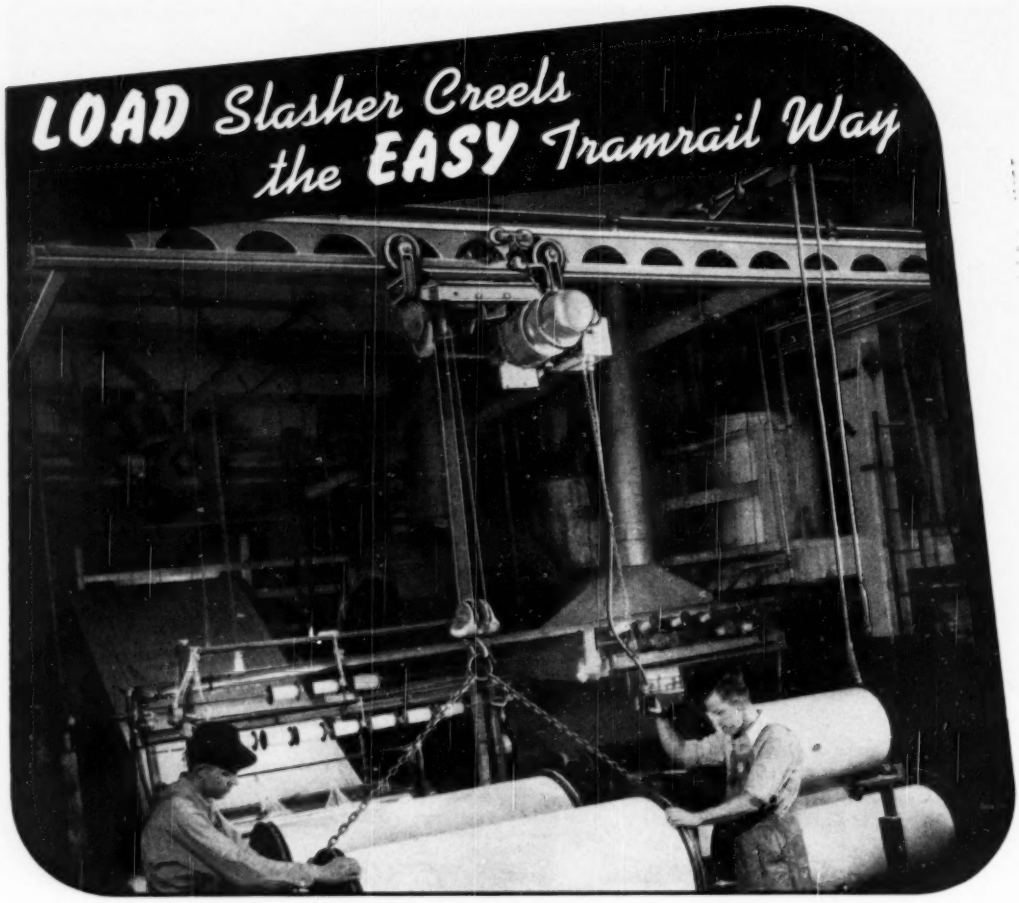
Manufacturers of Scientific Textile Oils-Sizing and Finishing Specialties-Dextrine and Starch Products

LOAD Slasher Creels the EASY Tramrail Way



It is so simple and fast to load beams into slasher creels with Cleveland Tramrail, it is no wonder that so many mills — large and small — are rapidly swinging over to this modern way of handling.

In jiffy time a heavy beam can be set into a creel with minimum loss of production from slasher shut-down. The same hoist that inches the beam carefully into position usually selects the beam out of storage. Thus delivery is direct and all time-consuming rehandling is eliminated.

Most likely, there are installations of Cleveland Tramrail near you, that you can visit and study. However, the most effective way of demonstrating its possibilities is to select a good test job in your own plant and put in an installation of Cleveland Tramrail. Then carefully study the equipment and make accurate record of the results. In this manner, you can determine first hand whether or not you can profit by its use.

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CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
2856 EAST 287th ST. WICKLIFFE, OHIO

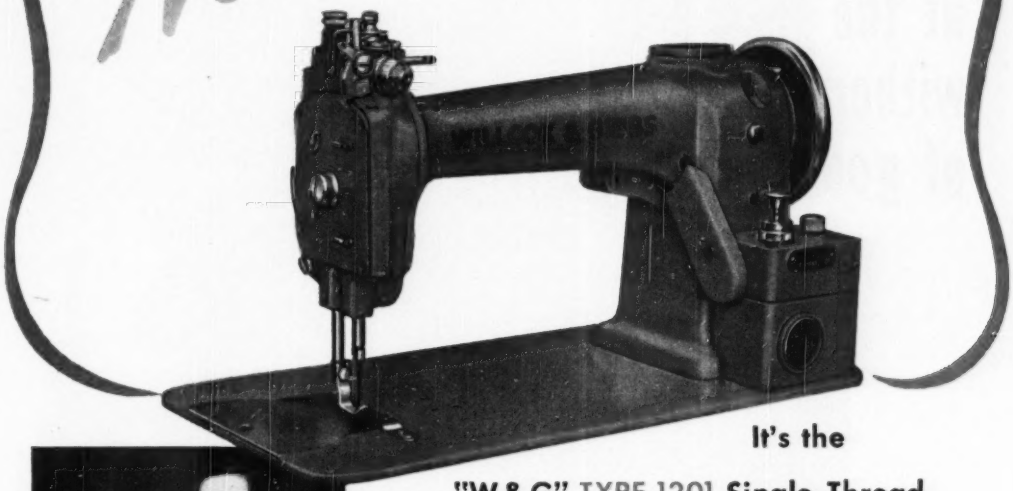
CLEVELAND TRAMRAIL
OVERHEAD MATERIALS HANDLING EQUIPMENT

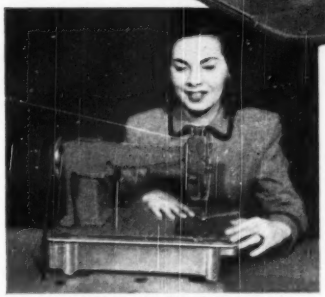
New

★ 50% FASTER

★ AUTOMATICALLY LUBRICATED

★ EASIER TO OPERATE AND MAINTAIN





The Type 1201 single-thread chainstitch machine can be mounted flush with the table top — or on a sub-base (as above) which raises the work surface about three inches above the table top.

It's the "W & G" TYPE 1201 Single-Thread Chainstitch Machine

The "W&G" 1201 represents a radical departure from conventional chainstitch machine design, incorporating the many service-proved advantages of the "W&G" high speed Locksmith machine.

Lubrication is *fully automatic*. Work space is much larger and roomier. Threading and stitch regulation are easier. And operating speeds of up to 4500 stitches per minute are entirely practical where conditions permit.

Type 1201 is equipped with an exclusive tensioning device which measures and mechanically pulls off from the cone, the exact amount of thread required for each stitch. The length and tension of the stitch can be readily adjusted by the operator.

If you've been looking for ways to speed up production of your chainstitch operations, it will pay you to look into this completely new Type 1201 machine. It's ideal for seaming or hemming neckwear, umbrellas, etc. — for sewing facings and bindings on knitwear — for label sewing on all kinds of garments.

For the *complete* story, simply fill out and mail the coupon below.

WILLCOX & GIBBS
Sewing Machine Co.

214 West 39th St., New York 18, N.Y

Gentlemen:
Please send me a free copy of Bulletin No. 941, on the new Type 1201 chainstitch machine.

WILLCOX & GIBBS Sewing Machine Company
214 West 39th St., New York 18, N. Y., Dept. G4

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"NUCLOTEX" COTTON CARDING

REMOVES MORE TRASH

and short fiber at the feed end, without loss of good stock

PLATT'S new cotton card, incorporating the "NUCLOTEX" (Trade Mark) SYSTEM, will increase production while maintaining quality; improve quality without reducing output; or it will, within limits, raise both production and quality! That's a lot to claim but those facts have been *mill proven* The "NUCLOTEX" SYSTEM also achieves greater regularity of weight per yard in the sliver and improves the sheen. If you are combing the sliver later, you will find this process easier with less waste to be removed at the combs. Full data on the "NUCLOTEX" SYSTEM and Platt Cards will be sent upon your request to Atkinson, Haserick & Co.

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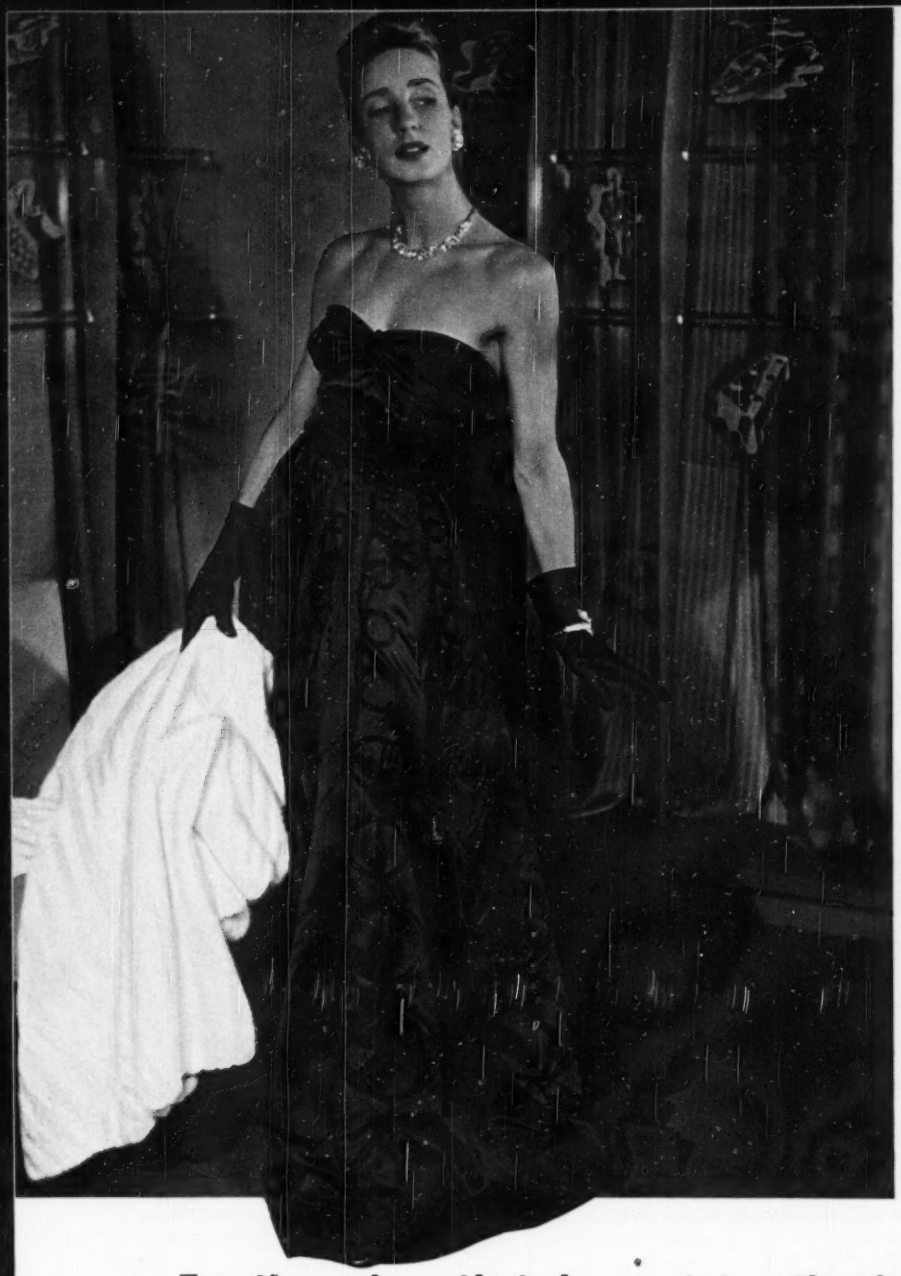

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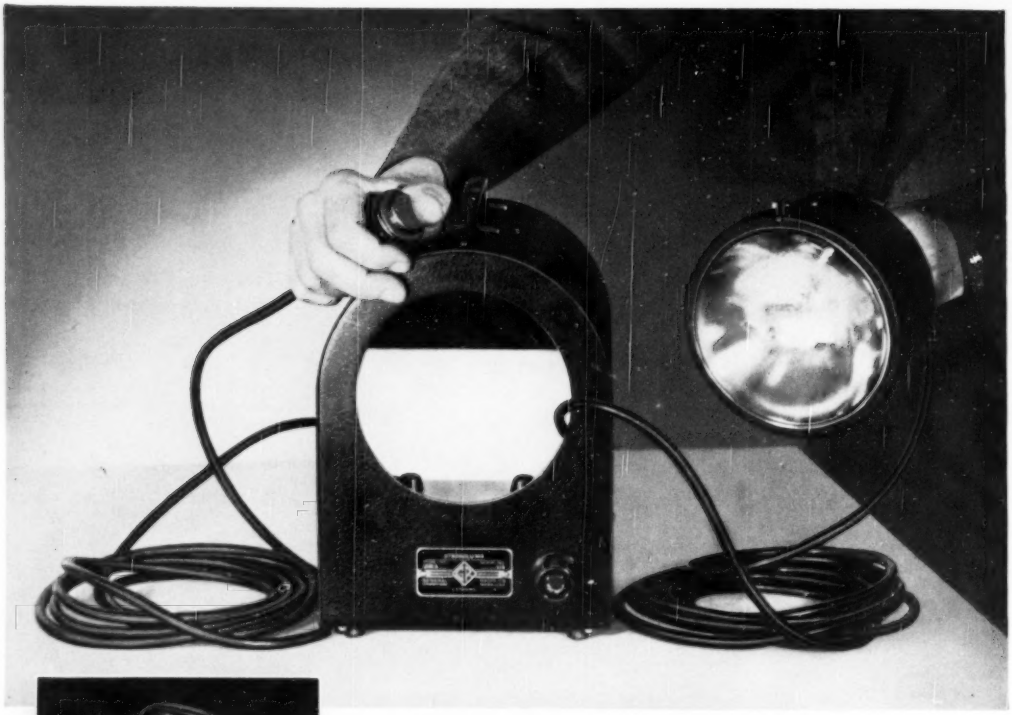

The Type 631-BL STROBOTAC is a special model of this popular instrument with an extra-low speed range of 60 to 1,440 rpm selected by a switch. In addition it has the standard STROBOTAC speed range of 600 to 14,400. The latter is calibrated to read directly with an accuracy of ± 1%.

TYPE 631-BL STROBOTAC $155.00

An EXTRA-HIGH-INTENSITY STROBOSCOPE for S-L-O-W Motion Textile Machinery

ESPECIALLY designed for use in the textile field, the Type 1532-A STROBOLUME furnishes just the right light intensity and slow flashing rate for either observing or photographing loom shuttle operation, warp knitters and the many other s-l-o-w speed textile machines.

The STROBOLUME gives an intense light with a flash length of only ten millionths of a second. It can be 'fired' in several different ways. For single-flash photographs, taken at random, it is equipped with a cord and push-button switch for firing the light in a single flash. For multiple-flash pictures or visual observation, a contactor on any rotating shaft of the machine will supply flashes synchronized to 1200 rpm.

A special slow-speed STROBOTAC is available for use with the STROBOLUME to trigger the latter at any speed between 60 and 1200 rpm. This special STROBOTAC, alone, has an operating range of 60 to 1,440 rpm.

This new STROBOLUME has opened up many possibilities in the scientific and most efficient operation, maintenance and design of slow-speed textile equipment. If you have any motion-study problem in the use, maintenance or modification of your equipment, the STROBOLUME may be an invaluable aid.

This equipment is sold directly from our factory or branch engineering offices. We do not have any travelling salesmen. May we send you complete information?

TYPE 1532-A STROBOLUME $225.00

WRITE FOR THE STROBOLUME BULLETIN

GENERAL RADIO COMPANY Cambridge 39, Massachusetts

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Trends Indicated in Industry Area Survey

Textile Industries
Vol. 114 • June 1950

1. Hospitalization Insurance

IN A SURVEY conducted by the editors of TEXTILE INDUSTRIES, on a total-area sample basis, it was shown that 94% of the textile employees in the areas sampled come under some type of hospitalization program, where either the company pays for the program entirely, the employee-company participate in paying for the program, or the insurance is available through a conveniently arranged company plan but the employee pays the full amount.

In the sampled areas, the percentages where the total hospitalization insurance is paid by the company for the employee are as follows: organizations 41%, mills 36%, spindles 37%, representing 35% of the employees.

Employee - company participating: organizations 21%, mills 16%, spindles 19%, representing 23% of the employees.

Available, employees pay: organizations 23%, mills 40%, spindles 39%, representing 36% of the employees.

No plans are in 15% of the organizations, 8% of the mills, 5% of the spindles, representing 6% of employees, in surveyed areas.

2. Life Insurance

Life Insurance. 68% of the employees come under some type of life insurance program. In the sampled areas, the company pays the total life insurance for 26% of the employees, the employee-company participating plan is for 28%, with 14% of the employees having the program available but paying the entire cost.

No life insurance plans are in 39% of the organizations surveyed, 38% of the mills, 33% of the spindles, representing 32% of the employees.—J. C. F.

HOW SURVEY WAS CONDUCTED

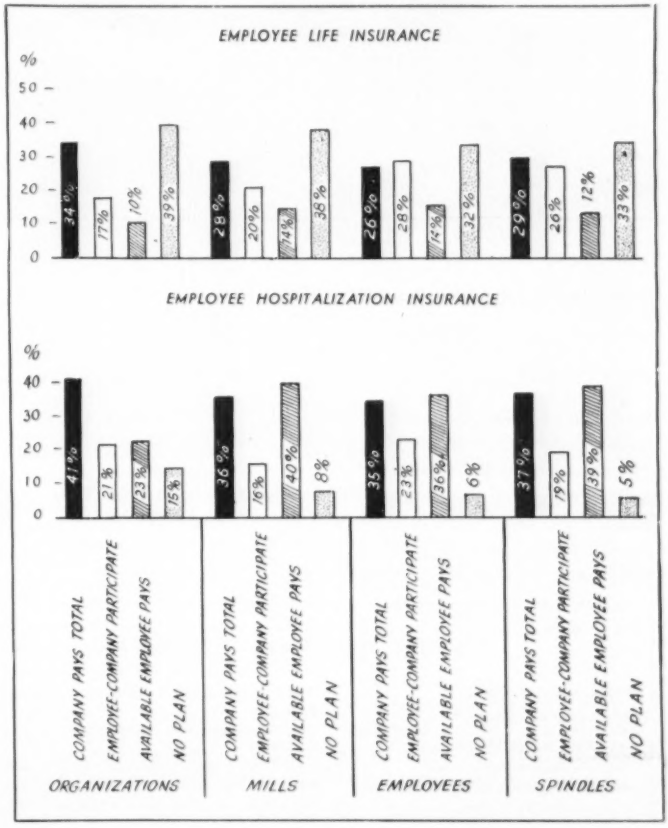
THE SURVEY was conducted in several southern states on personal visits to the mills by the editors of TEXTILE INDUSTRIES. The total-area sample method was used, whereby all of the mills within a chosen radius were polled. Enough areas were used to give a good sample. Knitting and woolen mills were not included.

To check sampling procedure, the sample of one state was enlarged to include approximately sixty per cent of the spindles. As a further check on the reliability of the sample, questions were injected into the questionnaire on which previously compiled industry figures are available.

Although any method of statistical selection may be criticized, the editors believe that the sample is large enough to indicate a trend in the areas covered.

Even though the double checks made from known figures prove the reliability of the survey, readers are cautioned against an attempt at projecting the percentages for application to other areas or other branches of the industry.

Note: An "organization" may be composed of only one plant, or an organization may represent several plants. The term "mill" indicates a single unit. Thus, where an organization answers, one or more mills may be included in the total. Few industry statistics are based on organizations; most statistics apply to mills, spindles, or employees.



Vat Paste Preparation is

Child's play!

— **With AMBERTEX M**, National's liquid starch concentrate! You simply blend this ready-to-use thickener with chemicals and water

And in 30 minutes your paste is ready! In fact, it's so simple you no longer need cooking apparatus — cooling coils — storage tanks — steam — or 4 to 5 hours preparation time!

AMBERTEX pastes are *pre-controlled* for viscosity and stability. They deliver higher color yields. Especially effective with Rapidogen, Vat, and Acetate colors — also for white discharge. Smooth, uniform blotches. Soft pliable films that protect delicate fabrics — rinse out in a jiffy!

Address: 270 Madison Ave., NEW YORK 16; 3641 So. Washtenaw Ave., CHICAGO 32; 735 Battery St., SAN FRANCISCO 11, and other principal cities. In CANADA: National Adhesives (Canada) Ltd., TORONTO and MONTREAL. In ENGLAND: National Adhesives Ltd., SLOUGH.

National
STARCH PRODUCTS

We'd like to test these NATIONAL Textile Specialties and Starches:

- ☐ **Please send test samples**
- ☐ **Have a representative call**
- ☐ AMBERTEX M (described above)
- ☐ SPUNJEL for spun rayon sizing
- ☐ FLOTEX to replace natural printing gums
- ☐ TABLE ADHESIVE for screen printing
- ☐ FLOCK ADHESIVE 970 for chenille printing
- ☐ FARILON for Rapidogen printing and backfilling
- ☐ CLEARFILM for bright, lustrous finishes on cotton and rayons
- ☐ VAT THICKENER 36 for rayon and cotton

Mr._____

Company_____

Address_____

City_____ Zone_____ State_____

NEWS in BRIEF

Damage from Reused Bagging. Secondhand bagging used to package dyed lint and later used to bale white cotton has been known to cause trouble in that the dyed lint becomes mixed with white stock, when the bagging is not thoroughly washed. This cost reducing procedure for ginners is expensive for the cotton mills.

Hysteresis Torque Device. A new experimental device, utilizing the hysteresis torque principle, has been developed by General Electric to enable textile mill operators to control yarn tension to accuracies previously impossible. The hysteresis brake will apply equal tension to all ends from creel to warper and will eliminate scuffing and excessive flexing of delicate yarns, it is said. Pre-setting of any tension desired is possible. (For technical details, see page 185.)

Wool Wash Water Stream Pollution. Strict enforcement of legislation on anti-stream pollution is said to make vital to the wool industry the development of by-products from wool grease which would at least pay for the operation of clarification plants. Wool grease has been compared with coal tar as a source of new families of chemicals, but at present little is known of its actual constituents.

Retirement Plan for Carpet Companies. Four large carpet companies are reported by the union press to have signed agreements with TWUA to give operatives $100 a month pensions, including social security, upon retirement at age 65 and after 30 years service.

Weave Room Fires from Electrical Appliances? Although records on a national basis disclose that most fires in textile mills are in the weave room and are caused by electrical connections or appliances, a close check by one organization showed that even though the weave room fires began on the motor end of the loom, they could not (for the most part) be attributed to electrical connections. Bearing failure, maladjustment of parts, and mechanical connections were causing the fires.

Cotton Financed by ECA. Cotton financed in two years under the Marshall Plan is about 5.7 million bales, approximately $944 million. France, Germany, Italy, and the United Kingdom have received 90% of the European ECA-financed cotton. Cotton textile prices, unusually high in 1948, have declined appreciably with increased supplies in Western Europe.

Milliken's "Milium." The trademark name "Milium" has been chosen to designate the new warmth-without-weight fabric developed by Deering, Milliken & Co.; the process involves application of a metallic coating to the fibers in a fabric without interfering with the vital porosity. Any type of fiber can be treated.

Safety Test. The Revere Safety test, now available from Science Research Associates, 228 S. Wabash Ave., Chicago, consists entirely of pictures which show a cartoon character doing each operation three different ways. The operative taking the test indicates

"Textile Industries" Staff Photos

SEEN BETWEEN SESSIONS AT NAWM ANNUAL MEETING

TOP ROW (left to right): **Walter J. Hamburger**, director of Fabric Research Laboratories; **Giles E. Hopkins**, director of technology, Wool Bureau; **James F. Dewey**, president, A. G. Dewey Co.; **James J. Dugan**, president, John T. Lodge & Co.; and **Eugene O'Dunne, Jr.**, counsel for NAWM.

BOTTOM ROW (left to right): **C. R. Kinney**, **W. N. Cooper**, **B. W. Spencer**, and **C. T. Kinney**, all of Elmvale Worsted Corp.; **Elmer Ward**, president, Goodall Sanford, Inc.; and **W. F. Fitzgerald**, president of the Wool Bureau.

Report of the meeting and list of officers and directors were published on pages 94-A and 94-B of the May issue of TEXTILE INDUSTRIES.

BHC

BENZENE HEXACHLORIDE FROM TENNESSEE

Grinders and formulators will recognize Tennessee's technical BHC as a quality product. BHC, with a high average gamma content, easily ground, can increase your plant capacity and save you money.

When you buy chemicals from Tennessee, you are served by the only company whose rigid production and quality control starts with basic materials and protects each order until it reaches your plant. This integrated production pays off because it assures a smooth flow of dependable supply. You get as much as you need, just as you need it when you order chemicals from Tennessee.

TENNESSEE
PRODUCTS AND CHEMICAL
Corporation
NASHVILLE, TENNESSEE

each picture which shows "Joe" breaking a safety rule. Used at Revere Copper & Brass, Inc., the test and subsequent safety program reduced accident frequency more than 40%.

Home-Treated Cotton Goods Resist Dirt. Adding a small amount of "CMC" (carboxymethyl cellulose) to the final rinse water each time cotton goods are washed makes them harder to soil and easier to clean. The treatment was developed by the Institute of Textile Technology, Charlottesville, Va., under supervision of the Southern Regional Research Laboratory.

Knit Fabrics Studies. The Bureau of Home Nutrition and Home Economics of the Department of Agriculture is conducting studies to determine the effects of construction, finishing, and laundering upon the dimensional changes of elastic properties of knit fabrics. With the assistance of technical representatives from industry, various type laundering tests will be evaluated on a scientific basis, using standard samples to chart the effects. Results will be used as a basis for investigating the Redman Process more thoroughly.

Rubber Dollar. To give company employees financial facts about the organization and as part of a broad educational program, the U. S. Rubber Co. sent a rubber dollar to each employee. The "dollar" shows how the company spent its income.

Bonded Fabrics Harmed by NICD Methods. Sub-Committee A-14 on Bonded Fabrics meeting recently with Committee D-13 of the American Society for Testing Materials revealed that non-woven samples sent to the National Institute of Cleaning and Dyeing for cleaning tests were returned in an impaired condition. The non-woven fabrics became so badly wrinkled that ordinary means failed to restore the original appearance.

Moth-Proofing Floor Coverings. Carpet manufacturers are setting up a program which will evaluate various moth-proofing compounds for floor-covering applications. Insect damage measurement and test procedures for this type of textile product are to be developed by carpet producers and chemical manufacturers cooperating with Sub-Committe A-11 on Pile Floor Covering of the American Society for Testing Materials.

U. S. RUBBER'S RESEARCH AND DEVELOPMENT LAB

This new $250,000 textile research and development laboratory was recently opened by United States Rubber Company at Winnsboro, S. C. It will have a staff of more than 25 research men and women. The consolidation move is designed to improve and expand the company's textile operations. Research on asbestos products will continue at the company's Hogansville, Ga., plant.

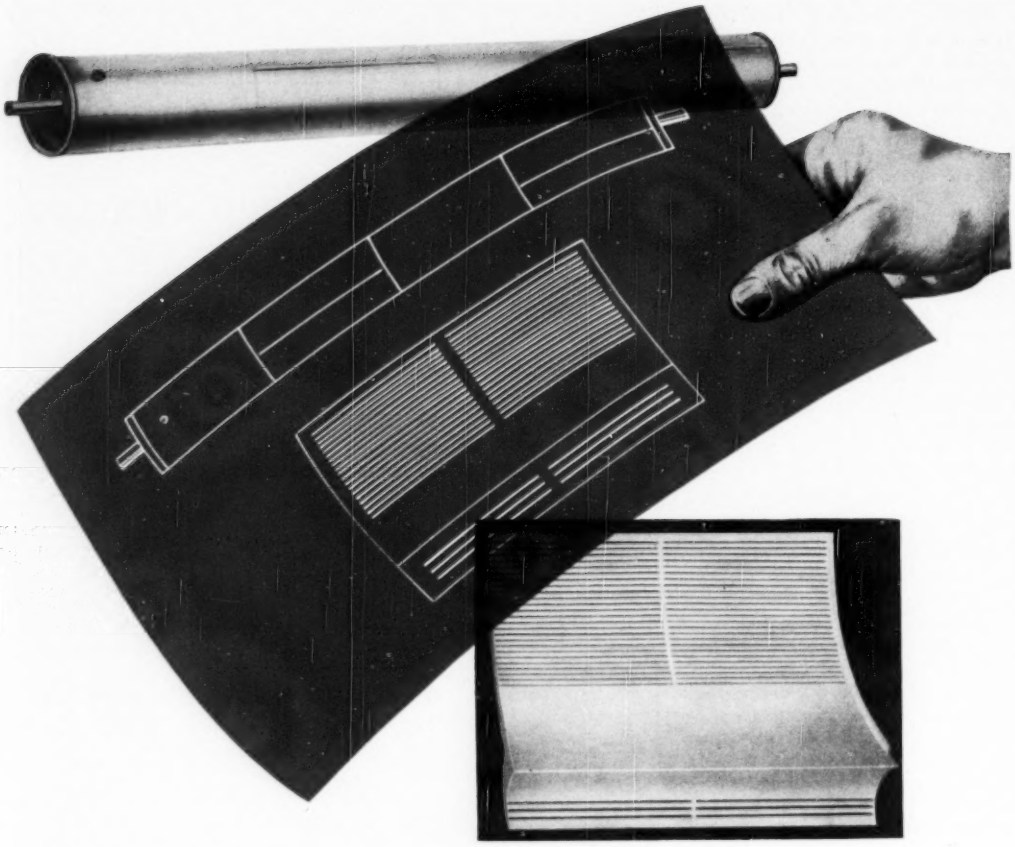
Pilot plant facilities to serve all mills of the textile division have been installed in the laboratory. Other facilities include a physical testing laboratory, chemical laboratory, machine shop, statistical department, technical library, conference room, and various offices.

S. H. Sherman, development manager for the textile division, is in charge of the new laboratory.

Ethiopian Potential. In the Ethiopian highlands are millions of acres of potential cotton land the government would like to see producing cotton for the growing requirements of that country, according to the National Cotton Council; it was also stated that a number of large prominent groups have been interested in obtaining concessions to produce cotton and manufacture textiles in Ethiopia.

Learners Rates. Sub-minimum wage rates may be paid learners under certain conditions under the Fair Labor Standards Act of 1938, as amended in October 1949. Recognizing that sub-minimum rates are necessary to prevent curtailment of opportunities for employment, the Wage Hour Division will issue authorization certificates provided that: experienced workers are not available, a learning period is required, learners are limited to that number necessary to cover labor turnover or expansion needs, and unfair competitive labor cost advantages would not be created.

Knit Goods Shrinkage Tests. Among the laboratories making studies of various methods to test the shrinkage of knit goods are, U. S. Testing Company, Lever Brothers, Quartermaster Laboratories, Celanese Corporation, The William Carter Company, and the U. S. Department of Agriculture Bureau of Home Nutrition and Home Economics. The results of these tests will be compared for accurate reproducibility by a task group of



ENGINEERED Products are CHEAPER in the long run

Jenkins engineered thinking has resulted in the development of engineered equipment to produce spinning cylinders and card screens so advanced in design and construction they

LAST NOTABLY LONGER GIVE SMOOTHER PERFORMANCE INCREASE PRODUCTION

IMPROVE YARN QUALITY LOWER COSTS

Put Jenkins products to the test in your mill and you'll get the *new efficiencies* so essential to meet the growing demand for higher quality and lower cost.

When you come to Jenkins, you benefit from more than 38 years of constant experimentation and precision workmanship that has resulted in dynamically balanced cylinders. die-cut and die-formed cylinders, new, improved card screen cylinder bars and many other product improvements.

JENKINS METAL SHOPS
GASTONIA, N. C.

DEVELOPERS AND EXCLUSIVE MANUFACTURERS OF DYNAMICALLY BALANCED CYLINDERS

the American Society for Testing Materials. Out of this work it is hoped a tentative specification for shrinkage testing will be evolved.

Knitting Machine Gift. The Edmos Products Corporation, Brooklyn, N. Y., has donated an 18", 14 cut, Type EEM multifeed rib machine to the textile school, N. C. State College. The machine came directly from the Knitting and Allied Crafts Exposition in New York.

Cotton Council to Meet in Biloxi. The National Cotton Council will hold its 13th annual meeting at the Hotel Buena Vista in Biloxi, Miss., January 22-24, 1951.

Patent Rights Infringed. Switzer Brothers, Inc., Cleveland, Ohio announce infringement of their U. S. Patent No. 2,450,085 covering fluorescent swimming garments. The manufacturers of the infringing garments have not been identified, but financially responsible retailers offering such garments will be named as defendents in suits. A large Chicago department store has already been named in one suit.

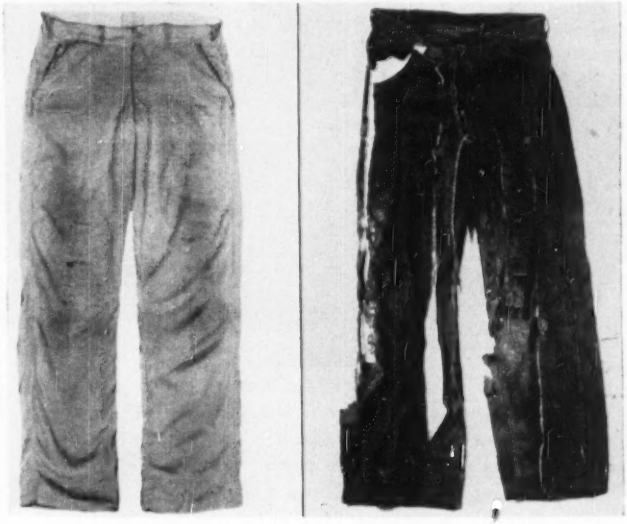
Industrial Mobilization (Wool). Final drafts of item mobilization plans for woolen and worsted fabrics have been presented for critical review and analysis to industry leaders by the Quartermaster Corps.

Foreign Fabric Collection for the Industry. A collection of over 100,000 foreign fabrics of natural and synthetic fibers is being made available to the textile mills and converters by Du Pont. Range of fabrics is from sheerest dress goods to upholstery materials. Samples are mounted on cards. May be seen by appointment with Fabric Development Section of the Rayon Division, Du Pont Company, Empire State Building, New York City.

Ruin in Wool Textile Tariff Cut. If the tariff rates on manufactured wool products are still further lowered, the industry may be faced with a ruinous flood of imports from countries with labor costs and standards of living far lower than in this country, according to Julius G. Forstmann, president of Forstmann Woolen Co.

Note: The Twentieth Century Fund and the National Planning Association are launching a joint study of America's capacity to consume more goods and services from abroad and the effects of increased imports on this country's industries. "Leaders of both organizations stress the importance to world peace and prosperity of creating positive U. S. import policies—both public and private—designed to reduce the dollar shortages abroad which prevent free nations from buying American goods."—News Release.

Metal Fishing Line. A combination nylon monofilament and metal trolling line, said to be extremely flexible and virtually



MAN-MADE AND MAN-CULTIVATED FIBERS

The above photograph was released by Carbide and Carbon Chemicals Division of Union Carbide and Carbon Corporation, with the information contained in the news release being credited to Chem-Wear Corporation, manufacturers of clothing.

The pictures show: right, cotton trousers used one week in heavy metal chloride service, washed once, completely disintegrated; left, trousers made from "Vinyon" N yarn used over three months in the same service with regular weekly washings, still in use.

According to Chem-Wear Corporation, extensive plant tests show that savings as high as $100 a year per man can be realized by using industrial work garments made with "Vinyon" N yarn. Such work trousers used by operators in acid plants have outlasted wool and cotton trousers as much as ten to one.

Resistance of the work clothing to chemicals is inherent in the fiber; the fabric is not treated. Although not fireproof, Chem-Wear is said to be fire-resistant and will not support combustion.

*EXTREME PRESSURE

All production machinery will last longer — give better service — if the proper lubricant is used. That's why you will find it profitable to use high quality Tycol oils and greases in your plant.

There's a reason! No matter what your lubricating need — *EXTREME PRESSURE, high or low temperature, high speed or any other service condition — there's a Tycol oil or grease suited to your specific requirements.

Refined from the highest grade crudes, Tycol lubricants are exceptionally resistant to breakdown which means greater economy . . . longer machine life for every type of equipment.

Tide Water Associated will gladly recommend the Tycol lubricant that meets your particular requirements. Call, write or wire your nearest Tide Water Associated office today.

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REFINERS AND MARKETERS OF VEEDOL — THE WORLD'S MOST FAMOUS MOTOR OIL

non-kinking, is made of fine Monel metal wire braided around a nylon monofilament core. Termed Monolon and manufactured by Braided Wire Products Company, Grosse Pointe, Mich., the line is made in a wide variety of test weights. The nylon core prevents flattening of the braided metal wire.

Knitting Exhibition in Britain. The first exhibition of knitting machinery and accessories to be held in Great Britain for 14 years will take place in Granby Halls, Leicester, October 11-21, this year. Exhibitors from America and the Continent will show their equipment and wares.

Magnetic - Fluid Clutch. Although still in the laboratory stage, General Electric has developed a magnetic-fluid clutch which consists of two metal cylinders, each able to rotate independently on the same axis; the clutch transmits rotary power from its source to its load. Cylinders are separated by a magnetic mixture of oil and finely-divided iron powder. When the unit is energized, fluid instantly solidifies, making a rigid connection between the two cylinders so that motion is transmitted through a solid connection. Power can be applied to the load and removed from it easily by the clutch operator. Degree of rigidity of the magnetic fluid can be controlled by regulating the current. Thus, the clutch can be allowed to slip if necessary.

Reduction in GI Bill Trainees. Veterans in the textile industry who worked under the GI on-the-job training in 1949 were reduced in number by two-thirds, as compared to the peak year of 1947.

Information on Marshall Plan. A 46-page brochure titled "Tips on Trade With Marshall Plan Countries," by E. K. Gubin, has been published by the NAM. The brochure explains how to go about getting orders financed with ECA funds; discusses the future of ECA-financed business, and lists the forms of ECA assistance available to small business.

Seven Steps To Textile Research. Continuity in any textile research program is now becoming recognized. According to Dr. J. H. Dillon, director of research, Textile Research Institute, scientific research programs may be classified as follows:

(1) Research for publicity purposes,
(2) Production trouble-shooting,
(3) Quality and process control,
(4) Short - range development with specific and limited objectives, generally aimed at product and process improvement,
(5) Long-range applied research on new materials, processes and products,
(6) Long-range fundamental research directly or indirectly related to the field of the company's interest,
(7) Support of academic research within university laboratories with the aim of increasing the general fund of research knowledge and accelerating the training of scientists for industry.

Japanese Gloves Hurt Canadian Industry. Four Canadian glove plants have closed and more than 700 Canadian operatives have lost their jobs since 1948 when Japanese gloves began reaching Canada in quantity. In 1949 a total of 82,000 dozen pairs of gloves were imported from Japan.

Policing Fabric Finishes. Converters and finishers are urging manufacturers of crease-resistance chemicals to supervise processing within the mill. Since the quality of the finish hinges on the proper application and equipment, they argue that crease-resist treated fabrics not measuring up to standard may tend to discredit all crease finishes among consumers. By policing mills and spot checking samples, chemical suppliers can avoid this possibility.

"HOW FAR MUST WE GO?"

(Comments on editorial in the April Issue.)

EDITOR TEXTILE INDUSTRIES:

A number of years ago a schoolboy with a bad memory, but a keen sense of practicality, recited to his startled teacher and tittering classmates, "A bird in the hand is the noblest work of God." In bungling his recitation, he had provided the perfect slogan for the rising generation of today, whose motto might be:

"Better an assurance of secure mediocrity than a doubtful chance at great achievement and great reward."

The young man mentioned in your editorial seems to be typical of the current crop of college graduates.

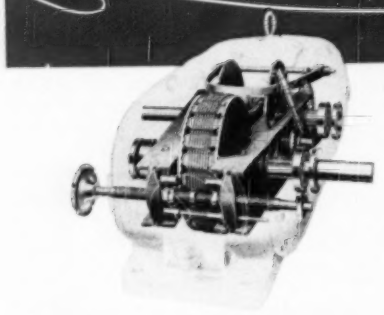
About a year ago one of the national magazines of great circulation hired a man and his wife to visit numbers of American colleges and question undergraduates about their hopes, aspirations, and expectations. After interviewing many hundreds of young people about to graduate, these reporters found almost none of these who aspired to anything more than a job with some big corporation at the highest possible starting salary, and the quickest rise to a position of mediocrity, but security.

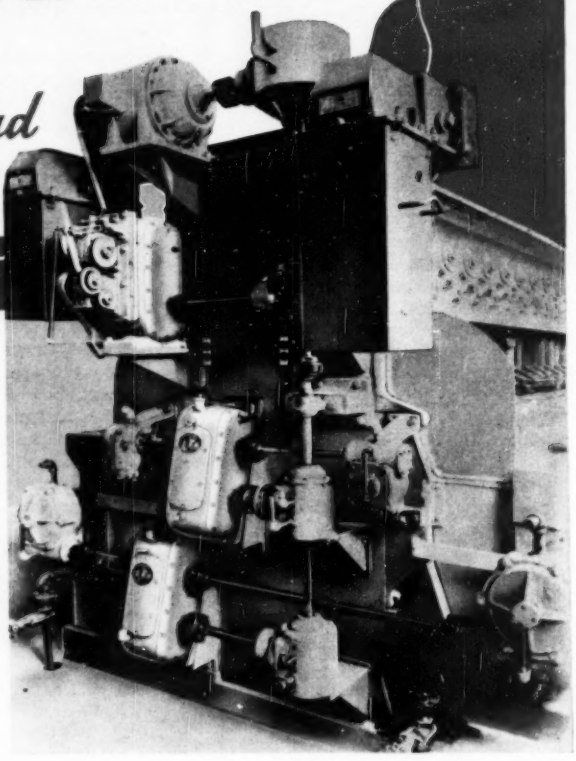
Out of these hundreds, only one or two expressed the hope of finally owning a business. Many of them frankly admitted that according to the testimony of their parents and their parent's friends, the present

(Continued on page 169)

LINK-BELT P.I.V. DRIVE

controls denier of Rayon Thread





Three P.I.V. Variable Speed Drives control metering pump and godet wheel speeds within extremely close limits on this double-godet 128-spindle rayon pot spinning machine. One P.I.V. accurately maintains speed of viscose metering pumps. Upper and lower godet wheels are driven individually by the other P.I.V.'s whose controlled difference in speed determine amount of stretch, and thus the denier of rayon thread.

When speed of a machine or a process is a factor in the quality of the product, the Link-Belt P.I.V. variable speed drive is the most satisfactory means of obtaining this end.

Power is transmitted efficiently from the driving to the driven shaft, by a unique steel chain, which engages radial grooves in steel wheels, giving positive, non-slip transmission. Ratio of input to output speeds is instantly changed by turning a small hand wheel, while the machine is running. Speed ratios are stepless, can be set at any point throughout the range of the unit. Once adjusted, the speed remains constant, without slip or hunting.

All-Metal, enclosed, self-contained P.I.V. drive is a precision product made in eight styles from ½ h.p. to 25 h.p. in speed ranges to suit innumerable applications. Send for Book No. 1874-B giving full details and valuable application suggestions.

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P.I.V. *Variable Speed Drive*

AN

EXECUTIVE VIEWS

THE NEWS IN TEXTILES

Prepared by a man who is closely identified with the textile industry.

The Lint Cleaner

SOMETHING new has been added. From the standpoint of cotton gins, that is. This time it is something called a lint cleaner, and as best we can understand it, it is some sort of mechanism or device which gives an additional cleaning to the cotton as it comes through the gin. Its purchase and installation is rather expensive, but we hear that more than a hundred gins have already installed lint cleaners.

The cotton mills have long been interested in securing cotton from the gins that is free of dirt, grease spots, tar stains, fragments of colored yarn, and old rusty horseshoes. It is no secret that some bales of cotton opened in mill opening rooms have been found to contain old shoes (the shoes never fit the opening room crew) and even assorted scraps of rayon, nylon, and jute.

Therefore, with a historical background like this, it is not unnatural to assume that cotton mill men are tremendously interested in any activity or process whose purpose is to give them a cleaner fiber. The manufacturers of lint cleaner equipment, as well as the operators of many gins, contend that a new lint cleaner will do just that. Around this question, however, there is now being centered quite a bit of industry comment.

Some production men contend that the more cotton is handled and the more machines it passes through before it reaches the mill, the more difficult it is for the mill to spin it. These men contend that the addition of the lint cleaner to ginning equipment means that the mills are going to get cotton which is harder to spin.

One or two mill managers have conducted small scale tests in which they have used similar types of cotton, one portion of which has come through a gin which has no lint cleaner and the other portion of which has come through the lint cleaner. These men say that a count of the number of neps found per square inch in the finished goods has illustrated to them that the industry must look very closely at lint cleaners before they are accepted.

On the other hand, cotton which has come through a lint cleaner will customarily be graded approximately one-half a grade above cotton which has not received this treatment. This means that the farmer receives a little more money than he would ordinarily get for his lint. Naturally, the farmer is in favor of lint cleaners.

What About Cost?

Manufacturers who are not completely "sold" on lint cleaners contend that while the farmer is getting a little more money for lint-cleaned cotton, the manufacturer is getting the short end of the horn. They contend that the mill must pay more for cotton and that instead of being able to make a better product, as might naturally be assumed, in reality a product is turned up which has more neps and is, therefore, inferior.

The government laboratory at Stoneville, Mississippi, recently conducted a number of carefully supervised tests which seem to show that the lint cleaner does not

BIGGEST ELECTRICAL DISPLAY KIT EVER BUILT

This is the More Power to America Special train which is touring 150 key industrial centers during this year and next. It is the biggest electrical display kit ever built. The 10-car exhibit train will display a complete range of products for production, distribution, and industrial utilization of electric power.

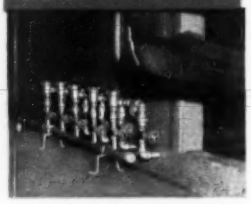
At each stop the train will be inspected by invited representatives of industry; it will not be open to the general public. Textile men will be interested in many of the more than 2,000 exhibits of modern electric products, systems, and techniques.

WHAT ARE YOU PAYING *for Condensate?* $ $ $ $

If your steam heated equipment is not supplied with hot, dry steam kept in intimate contact with the heated surface and free from air, you are paying for fuel that is being thrown away every hour.

Worse yet, you are paying double in lost production and rejects, if your equipment is not properly trapped and vented.

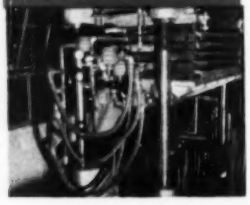
AUTOS



$ LOST TIME

Heating up time was reduced from 3 hours to 1 by using Sarco No. 9 Thermostatic Traps on enamel ovens in a large auto body plant. This trap has large air venting capacity. Removes condensate at 10°F below steam temperature.

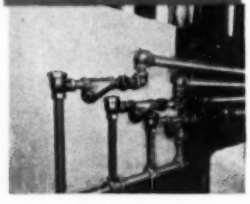
PLASTICS



$ REJECTED GOODS

With seven platens on this large plastics press, the weakest link (one cold section) made rejects frequent and without notice. Now seven Sarco Bucket Traps kick out the condensate and provide trouble-free production. This trap is ideal for releasing condensate as quickly as it forms—a must on plastics presses.

GREENHOUSE

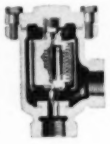


$ LOST FUEL

Most manufacturers don't know how much fuel they are losing due to inefficient trapping. In greenhouses, where fuel is a large part of the cost, monthly fuel bills tell the story fast. This greenhouse saved 30% of the fuel and 60% of the make up water by using Sarco Thermostatic traps on every line and every coil.

FOUR TYPES OF SARCO STEAM TRAPS TO CHOOSE FROM

Sarco makes all accepted types and can fit the trap to the job. Ask for trap selection chart No. 1600.



THERMOSTATIC

FLOAT-THERMOSTATIC

BUCKET

LIQUID EXPANSION

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IMPROVES PRODUCT QUALITY AND OUTPUT

cause an increase in the nep count. These tests have been disputed on the grounds that the "ginning" was done under careful supervision by experts and that the spinning and weaving was done under ideal conditions. It is pointed out that the average gin operator is not qualified to operate complicated machinery and that under such supervision the lint cleaner becomes a menace rather than an asset. It is also contended that no textile mill can operate under the ideal conditions found in a laboratory.

In short, some mill men feel that before lint cleaners can be accepted and before they will be willing to purchase cotton which has been so processed, it will be necessary to have a large scale commercial test made which will clearly demonstrate whether or not lint cleaners are advisable.

What Sort of Test?

To make a real test would involve the spinning of one hundred to two hundred bales of cotton. The cotton should be grown from the same seed and on the same farm in order to secure uniform conditions. It must be harvested at the same time, must be exposed to the same shipping "perils," and must be spun and woven and finished under exactly identical conditions.

Provided all this can be done, it will then be necessary to have a nep count made. This count should be made by the same people for all samples because of varying opinions as to what constitutes a nep. Once the neps have been counted, a rather conclusive picture could be obtained as to what, if anything, the lint cleaner does to the spinning qualities of cotton.

In conducting this test, it should be kept in mind that such damage as might now be sustained by cotton during the ginning process may come during the pre-cleaning stage. A number of accusing fingers have been pointed at the excessive heat utilized by some gins, as well as several other practices, and all of this should be considered when the test is being arranged.

It is our understanding that appropriate committees of the American Cotton Manufacturers Institute, Inc., and of the American Cotton Shippers Association will give further consideration to organizing a large scale commercial test. Cotton farmers, cotton ginners, and cotton manufacturers will welcome any information which may be obtained through this method. The farmer wants to receive the best possible price for his cotton and the manufacturer wants to secure the best possible cotton for the price he must pay. Each has a stake in the lint cleaner.

Another Problem

From the standpoint of raw cotton, another problem which will be of interest to mill men is one involved in the International Universal Cotton Standards Conference which was held in Washington in early May. This is the conference at which the government determines what cotton you will receive when you specify a particular grade. Strangely, the mill men who attended the conference as representatives of the various industry organizations did not have any vote in the decisions. It is a paradox that one of the parties to the cotton contract—the cotton manufacturer—does not have any vote when it comes to specifying what he will receive when he buys a given grade.

You may recall that when the last conference met several years ago, things went so badly that finally the mill men walked out of the conference because they did not feel they were being treated fairly. Be that as it may, when the smoke had cleared, the United States Department of Agriculture and cotton men from foreign nations had written the ticket. Mill men feel that the "boxes" which were set up at that time lowered the standards, and they feel that something similar will result from the current meaning.

All of this adds up to the fact that the manufacturer should have some voice in determining government standards for cotton.

June 9-10—Annual outing, **Southeastern Section, American Association of Textile Chemists and Colorists,** Radium Springs, Georgia.

June 16—Annual outing, **Philadelphia Textile Manufacturers Association,** Torresdale Frankford Country Club.

June 26-Sept. 1—**Gordon Research Conference on Textiles,** Colby Junior College, New London, N. H.

June 26-28 — **New England Industrial Waste Conference,** Massachusetts Institute of Technology, Cambridge, Mass.

June 26-30 — 53rd annual meeting of **American Society for Testing Materials,** Atlantic City, N. J.

June 30-July 1 — **Piedmont Section, AATCC,** Ocean Forest Hotel, Myrtle Beach, S. C.

July 27-28—**Cotton Research Congress,** Baker Hotel, Dallas, Tex.

August 7-19—**First United States International Trade Fair,** Navy Pier, International Amphitheatre, Coliseum, and Arena, Chicago, Ill.

August 18-19 — Summer outing, **South Central Section, AATCC,** Read House, Hotel Patten and Country Club, Chattanooga, Tenn.

Sept. 5-9—**American Chemical Society,** National Chemical Exposition, Coliseum, Chicago, Ill.

Sept. 11-13 — Joint meeting, **Southern Combed Yarn Spinners' Association** and **Spinner-Breeder Conference,** El Paso, Texas.

Sept. 22-23 — Second **Canadian Textile Seminar,** Queen's University, Kingston, Ont., Canada.

September 23 — **Southeastern Section, AATCC,** LaGrange, Ga.

September 28-29 — Annual meeting, **National Association of Cotton Manufacturers,** New Ocean House, Swampscott, Mass.

Sept. 28-30—Annual convention, **American Association of Textile Chemists and Colorists,** Wentworth-by-the-Sea, Portsmouth, N. H.

September 30—**Piedmont Division, STA, Charlotte Hotel, Charlotte, N. C.**

Oct. 2-7—**16th Southern Textile Exposition,** Textile Hall, Greenville, S. C.

Oct. 11-21—**International Exhibition of Knitting Machinery and Accessories,** Granby Halls, Leicester, England.

Oct. 12-13—Annual meeting, **North Carolina Cotton Manufacturers Association,** Carolina Hotel, Pinehurst, N. C.

October 16-21—**International Silk Congress,** New York City.

Oct. 26-27—Annual Convention, **Carded Yarn Association,** Carolina Hotel, Pinehurst, N. C.

Nov. 16-17—Annual meeting, **Textile Research Institute,** Waldorf-Astoria Hotel, New York, N. Y.

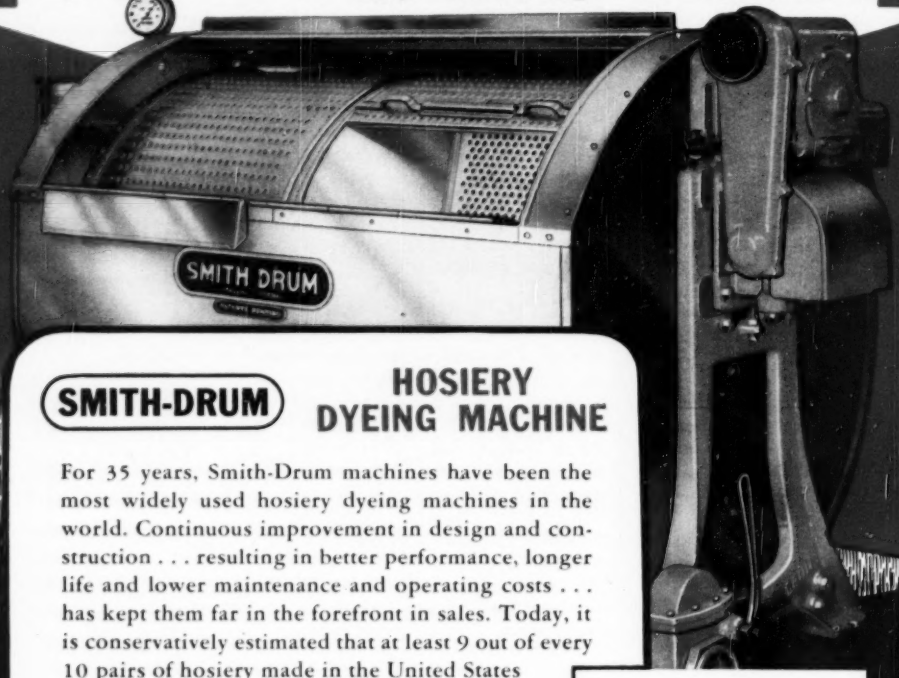
Nov. 26-Dec. 1—Annual meeting, Textile Division, **American Society of Mechanical Engineers,** Hotel Statler, New York, N. Y.

Dec. 9—**Southeastern Section AATCC,** Atlanta, Ga.

This machine Dyes

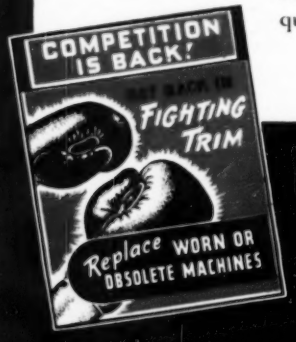
90% of the Hosiery

made in this Country and Canada



SMITH-DRUM **HOSIERY DYEING MACHINE**

For 35 years, Smith-Drum machines have been the most widely used hosiery dyeing machines in the world. Continuous improvement in design and construction . . . resulting in better performance, longer life and lower maintenance and operating costs . . . has kept them far in the forefront in sales. Today, it is conservatively estimated that at least 9 out of every 10 pairs of hosiery made in the United States and Canada are dyed in Smith-Drum machines. The newest models are of all-stainless steel construction, in both rotary and paddle types. Sizes range from 10 pound capacity to 500 pound capacity. Complete catalog will be sent promptly upon request. Write to . . .



SMITH, DRUM & COMPANY

Allegheny Avenue at 5th Street, Philadelphia 33, Pa.

SHORTS and REMNANTS

Core Testing

"We received the reprints of the article pertaining to core testing of wool and want to thank you very much . . . would like to request additional copies, if possible."

D. C. HIGLEY
Wool Purchasing Agent
Bigelow-Sanford Carpet Co.
New York

● The article appeared in January 1950. We try to anticipate reprint requests, and in this instance ran off 1500 copies. Demand was great and only a few copies are left.

Thorough Coverage

"We have reviewed your series of wool core boring articles in the January 1950 issue of TEXTILE INDUSTRIES with great interest. These articles seem to cover the subject of core boring very thoroughly and precisely. They were also well arranged and edited. The use of a number of articles written by top men is a good idea and results in a thorough cross section of opinion and data."

ROBERT A. POSEY
The Beattie Mfg. Co.
Little Falls, N. J.

Distributes Editorial to Employees

" . . . it will be appreciated if you will furnish me 400 reprints of 'A Going Concern is Gone' from the September 1949 issue of TEXTILE INDUSTRIES. I think it will be very helpful at this time to distribute them among our employees."

NAME WITHHELD

Wool Opener

" . . . wish to obtain a reprint of the article entitled 'Wool Opener Saves One-Third Labor Costs,' which appeared in February 1949 issue."

D. E. MILLS
Librarian
Courtaulds Canada, Ltd.
Cornwall, Ontario

V-Belt Life

"Will you kindly send to this office a few copies of the article entitled 'Proper Tension is Important in Obtaining Maximum V-Belt Life' by E. A. Gahl, from September 1949 issue."

J. SCHLEIMER
W. E. Greene Corp.
Woolworth Bldg.
New York 7, N. Y.

Lifo Method

" . . . interested by the article about lifo method of inventory pricing from the March 1950 issue. Are there any books or other literature describing this method."

HARRY BRASSEUR
Cotonniere Nouvelle Orleans
Gand, Belgium

● Complete information may be secured from American Institute of Accountants, 270 Madison Ave., New York 16, N. Y.

Doffer Incentive

(Following letter was addressed to R. A. Butler, Mgr., Spray (N. C.) Cotton Mills, co-author of the article "Workable Incentive Plan for Doffers," which appeared in the March issue.)

" . . . have read with the greatest interest the article by you and Mr. Peterson. As it is just one point in which we feel that our mill is not organized properly, I have naturally studied your article . . . am writing to ask you if you could find time for having a talk with my son when he comes to the States and show him your system actually working . . . our doffers (who are young women) are paid 90% of the average of the spinners' wage for the group they are doffing, but the efficiency of that system is not satisfactory. I think your way is far better."

H. WINDFELD-HANSEN
Windfeld-Hansens Bomuldsspinderi
Vejele, Denmark

Incorrect Impression

"I fear that the article in An Executive Views the News in Textiles (Feb. TI, page 83) may give some of your readers an incorrect impression of what is happening in Britain . . . author says Britain is a police state. From article: 'Great Britain at last had Socialism and in its wake came austerity, the official name for rationing, for high taxes, for less goods and less money to buy them with' . . . shows the muddled thinking so many of your countrymen employ in dealing with the position in Britain."

L. E. MORRIS
Middlesex, England

● Exec. Views for February reviewed and took its theme from "The Road Ahead" by J. T. Flynn. We hope that Reader Morris is correct; reports and personal conversations with his countrymen indicate conditions are not good.

Issues Disappear

"Once again we presume upon your good nature in helping us get a back issue of TEXTILE INDUSTRIES . . . for some reason or another has disappeared from our office."

HENRY M. SCHILLER

SET OF BOUND ISSUES AVAILABLE

A retired mill executive has notified TI that he has complete sets of "Cotton" and "Textile Industries" in bound form (less knitting section) for the years 1931 through 1946. All are in permanent binding except the year 1945, which is in loose leaf binding. The bound issues are offered for sale. Interested parties may contact this man through the editors.

GREENVILLE SHOW

The 16th Southern Textile Exposition, for many years called "The Greenville Show," will be held in Greenville, S. C., October 2-7, this year.

The latest report indicated that more than two hundred manufacturers and dealers in textile machinery, equipment, accessories, materials, and supplies will be represented at the show.

Plans have been made for special committees to arrange for hotel and other accommodations so that both exhibitors and visitors may be assured of comfortable quarters while attending the exposition.

HOW FAR CAN YOU GO IN USING *Stainless Steel* TO CUT COSTS?

THAT'S a question that probably is impossible to answer specifically . . . it almost seems as if the sky is the limit. But generally, you can be guided by these rules: —

Use Stainless Steel wherever you need superior protection against corrosive action . . . use Stainless Steel at every point where there is danger of stock discoloration . . . use Stainless Steel wherever you need strength and durability with light weight . . . use Stainless Steel wherever equipment must be frequently cleaned.

Every day as new equipment is installed or old equipment is modernized, more and more Stainless Steel is being used to insure top performance, at lower cost. Stainless Steel's ability to stand up under the wear and tear of fast, heavy runs; to resist acids, bleaches, soaps, dyes and other chemicals; to save time in cleaning and to eliminate color bleeding and carry-overs, all combine to give it marked advantage over other materials. It can be confidently counted upon to reduce operating costs, minimize maintenance and to greatly prolong equipment life.

That's why it will pay you to examine critically *every* replacement or addition of equipment in terms of Stainless Steel.

For Stainless that will give you the best in performance, be sure that your fabricator uses U·S·S Stainless Steel. U·S·S Stainless is available in such a wide variety of forms . . . sheets, strip, plates, pipe, tubing, wire . . . and in a complete range of compositions and finishes that it permits the fabricator the widest latitude in design and the use of the most advanced fabrication techniques. To you, the equipment user, this means the best Stainless Steel performance you can obtain.

AMERICAN STEEL & WIRE COMPANY, GENERAL OFFICES: CLEVELAND, OHIO · CARNEGIE-ILLINOIS STEEL CORPORATION, PITTSBURGH & CHICAGO
COLUMBIA STEEL COMPANY, SAN FRANCISCO · NATIONAL TUBE COMPANY, PITTSBURGH · TENNESSEE COAL, IRON & RAILROAD COMPANY, BIRMINGHAM
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SHEETS · STRIP · PLATES · BARS · BILLETS · PIPE · TUBES · WIRE · SPECIAL SECTIONS

UNITED STATES STEEL

Textile Industries
JUNE, 1950

Dry Cleaners Urge Cooperation

By BOLLING BRANHAM
Associate Editor
"Southern Cleaning & Laundry News"

THE DRY CLEANING industry, which receives the complaints of irate customers who are dissatisfied with dry cleaning jobs on textile merchandise, is organizing itself to work for more cooperation from retailers and manufacturers.

Dry cleaners admit that the quality of dry cleaning varies, often from cleaner to cleaner and locality to locality. But they want customers to understand the difference between a cleaner's fault and the fault that lies in poor cleanability of textiles.

Court Case. Retailers and dry cleaners alike have a stake in this problem, and they're getting together to let the public know when the fault lies with the manufacturer. The effectiveness of the program may be gauged by a recent court case in Palo Alto, California—"The Case of the $14.95 Skirt That Shrank."

This case was fought with great tenacity by Cardinal Cleaners of Palo Alto, backed by R. R. Street & Company, a chemical firm, and Cardinal Cleaners indeed won a cardinal victory that may outweigh a thousand-fold the value of the skirt itself. These words were in the court opinion: "The seller impliedly warranted to the purchaser that the dress was suitable for the purpose for which it was purchased and that purpose included the cleaning of the dress. Therefore, it was the order of the court that judgment for the value of the dress be entered against the retail merchant and not against the cleaner." The decision was handed down November 18, 1948, by Edward E. Hardy, Justice of the Peace, County of Santa Clara, Palo Alto Township, Palo Alto, California.

Judge Hardy stated that he would rather pay the claim out of his own pocket than spend so much time on it, were it not for the fact that an increasing number of garment damage claims

were coming into his court and he was interested in getting to the bottom of the disputed points.

A technical expert testified that the shrinkage had resulted from loss of sizing. The dry cleaner said the skirt had been cleaned by standard methods through use of a synthetic dry cleaning solvent. The store representative produced an analysis report from a commercial testing laboratory which stated that the garment apparently had been subjected to "washing action" and that the dry cleaner was at fault.

Mention was made of two sources of laboratory analysis commonly used by the dry cleaning industry to obtain complete and impartial information regarding the cause of garment damage: Ohio State College and Pennsylvania State College. Judge Hardy requested that the skirt be sent to these laboratories for an analysis and report.

This was done, and detailed reports covering weave of fabric, type of fibers, sizing, and construction of the skirt were given to the judge. Both reports stated that the skirt had not been wet cleaned. Both reports were in harmony on the cause of shrinkage and distortion.

Briefly, it was brought out that the skirt was made from Bengaline, which is a ribbed weave fabric with a heavier, more rounded rib than a Faille or poplin, and is woven from rayon and cotton yarns. "In ribbed fabrics of this type," one report stated, "it has been found that the greatest cause of shrinkage is attributed to the improper finishing of the fabric during manufacture. In weaving, the rayon warp yarns are stretched on the loom and a sizing applied to keep the yarns stretched and taut to give the warp yarns added strength to withstand the strain which accompanies the introduction of the filling yarn during the weaving process. During the finishing of the fabric, the fabric is stretched again to get the most yardage possible. The sizing used in the fabric is moistened with water, water vapor or steam and/or dye solvents. The shrinkage which results is known as residual shrinkage."

In summary, one of the laboratory reports stated:

"It is the opinion of this laboratory that the distortion which occurs in the Bengaline skirt is due to two causes, namely:

1. In dry cleaning, residual shrinkage of the fabric occurred and is traceable to the yarn and weave characteristics of which the skirt is made.

2. The distortion is traceable to the manner in which the skirt was cut from the fabric to obtain a bisymmetrical circular skirt. Any bias cut skirt will become distorted upon hanging alone, wear alone, or in hanging and wear in combination with any means of renovation, whether it be dry cleaning, wet cleaning, or laundering."

Educational Program. This is important, for *where does the blame lie?* It provides additional proof that a garment or fabric manufacturer, rather than a dry cleaner, often is at fault when garment damage occurs; that the dry cleaning industry can successfully defend itself against unjust claims. Most important, it points to the fact that much educational work should be done by the industry among fabric and garment manufacturers, retailers, and small claims court judges.

This educational work is well on its way. At the 40th annual convention of the National Institute of Cleaning & Dyeing held in Philadelphia, February 13-16, 1949, and attended by 10,000 of the country's cleaners, a retailer relations panel was conducted by some of the top figures and most imminent authorities throughout the entire country.

T. E. Milholland, vice-president of the N.I.C.D., said, "Retailers and dry cleaners handle the same merchandise and deal with the same customers," and called for an exchange of information. Albert Johnson, N.I.C.D. director of trade relations, declared the interdependence of the textile and dry cleaning industries has not been fully appreciated. "The textile industry expects us to maintain fashion," he pointed out. He urged cleaners to study N.I.C.D. technical bulletins, and keep up with research.

Marks and Labels. Dr. Jules LaBarthe, senior fellow of the commodity standards fellowship at Mellon Institute of Industrial Research, University of Pittsburgh said, "What the consumer wants is fabric and fashion in a garment which will clean well, look good as new after cleaning, and which will wear out slowly in a genteel fashion." He urged cleaners to check technical bulletins, work with local store buyers, and check local advertising. Of particular interest was his recommendation that the new invisible marking methods be used by dry cleaners to determine if a woman is telling the truth when she returns a damaged garment with the statement: "This has been cleaned only once." This would offer protection to all concerned with textiles.

Dr. Ruth Ayres, managing director, National Consumer Retailer Council, said that this organization was educating women to be good and careful buyers in their job as purchasing agent for the American family.

No less a figure than Dr. W. E. Coughlin, Director, Textile Laboratory, Good Housekeeping Institute, assailed manufacturers on the matter of informative labeling. "The Association campaign is not new," he stated, "but it is more vigorous than ever before, and it is attaining results." As an example, he pointed out that belts which will stand up under cleaning are now available from many sources, due to the steady pressure of the cleaners.

Dr. Coughlin stated that Good Housekeeping has often given out labels with full information as to cleanability. Information has been derived from some 75,000 individual tests performed by the laboratory. Blow-ups of these labels have often been used by retailers in visual merchandising. "It is said that labels are not read," Dr. Coughlin stated, "but if this is so, then the only reason they have not been is because they have had nothing on them but half-baked advertising." This statement came from a man in the textile industry!

Quality Standards. Henry G.

Leef, merchandise manager with Woodward & Lothrop, Washington, and chairman of the ready-to-wear group, National Retail Dry Goods Association, struck equally at retailers and dry cleaners. "I understand the association has conceded that the percentage of quality cleaners is relatively small as compared to the mediocre cleaners. Thus it becomes the obligation of the cleaning industry to improve the quality of their work to the point where no doubt can exist regarding the misuse of articles while in the possession of the cleaner." He also challenged manufacturers, saying piece goods manufacturers and converters should ask themselves: If their selling force is informed, if they are doing an adequate job of informative labeling, why they do not lick gas fading, and shrinkage, and why do they sell fabrics that will not stand up under normal usage?

"I believe that basically each group is a fair-minded organization, willing to assume its just share of condemnation, and I believe that efforts will help pave the way for closer coordination, higher mercantile standards and better business for us all, and a fair deal for the consumer," was Leef's concluding statement.

Cleaners are following the advice handed out from this panel. Recently, the Birmingham, Alabama, Cleaner's Association conducted a special school for plant managers on the subject of "Man-Made Fabrics," according to C. Walter Emery, executive secretary of the organization. Representative store buyers also attended the school.

A similar report can be made on other local organizations throughout the country. Cleaners are improving their operations, and they want the public to know it. They are doing their best to handle cleaning problems of all textiles, but they want the manufacturers to know it.

More and more, customers are going to lean over the retail counter and say: "But how will this garment clean?" And the store buyer who can give a prompt and acceptable answer, and the label which gives the facts, are going to be of top importance as to whether that garment sells.

This will be part of the answer that the textile industry can give to the buyer's market. Better cleanability, better durability, more sales, more business—these things are equally important to the cleaner, the retailer, the manufacturer, consumer, and business.

Recording Yarn Tensiometer Built by American Viscose

A recording strain gauge tensiometer, composed of standard equipment which has been combined into a single unit, has been developed by the mechanical development branch of the Textile Research Department, American Viscose Corp., Marcus Hook, Pa. It simultaneously measures and records yarn tension in twisting, winding, spooling, warping, and tricot knitting operations.

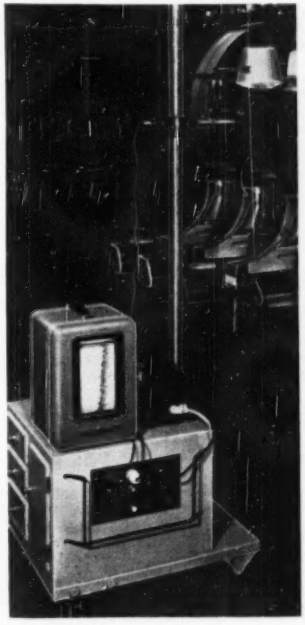
Standard parts were used throughout in assembling the machine. It was found that special made parts were not needed inasmuch as standard parts met the specifications. All of the parts used in the instrument were readily available, and the assembly was put together to supply the need for an instrument for measuring yarn tension in the various manufacturing operations.

According to reports, the device can also be adapted for yarn tension measurements on slashers, looms, spinning frames, and some fabric processing equipment.

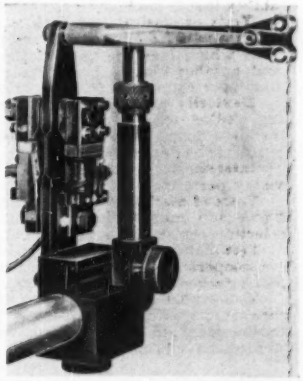
Essential parts are a yarn guiding mechanism attached to a strain gauge which converts a variable yarn electrical signal that is fed through an amplifier to a recording meter.

Since standard parts are employed, mill personnel may assemble such a unit for use in their plants.

Photo shows how standard equipment was combined by Avisco's Textile Research Department technicians to make the recording yarn tensiometer. The yarn guiding mechanism at the top is attached to the strain gauge, which converts the variable yarn electrical signal and feeds it through the amplifier to the recording meter.



A close-up of the strain gauge used by Avisco's Textile Research Department technicians in conjunction with an electronic recorder to measure and record yarn tensions during twisting, winding, spooling, quilling, and tricot knitting.



Industrial Aptitude Tests Are

By JOSEPH E. MOORE
Head, Department of Psychology
Georgia Institute of Technology

EXCLUSIVE

APTITUDE TESTS are earning themselves a place as dollar saving tools. These tests have been tried and proved of value in selecting better operatives. They supplement and strengthen rather than take the place of other means of selecting, such as the application blank and the screening interview. The value of tests extends beyond selection; the results help to train, transfer, and upgrade employees.

To prevent misunderstanding let us make it clear that no method of selection can be one hundred per cent accurate. Some plants have tried testing and failed to get the kind of help they expected and needed from tests. There are many reasons for such failures. Some of these reasons have already been listed.

Where aptitude tests have been used with caution and care there is general agreement that they can aid in reducing labor costs by helping to fit the capable employee into work which suits his particular abilities and skill.

FACTS ABOUT APTITUDE TESTS

Aptitude tests have proved to be of value in supplementing other methods of selection, such as the application blank and the screening interview.

Failure of tests to prove of value in selection may have been due to: unwise selection of tests, the inaccurate administration of tests, the inaccurate scoring or interpreting of test results, the use of inaccurate plant records of performance or production, and a poorly planned program of follow-up to check on the merits and value of the test tried out.

The results of research on tests are grouped under seven main headings, namely: (a) tests of learning ability, (b) clerical and bookkeeping tests, (c) dexterity tests, (d) interest tests, (e) mechanical aptitude and ability, (f) personality tests, and (g) vision tests.

Tests of learning ability have proved valuable in selecting executives, clerical operatives, supervisors, salesmen, and skilled operatives. These test results indicate that a person can have mental ability that is too high or too low for certain jobs.

Tests of clerical and bookkeeping ability have shown promise in selecting better operatives. In addition to the learning ability test, tests which measure various aspects of clerical work such as name and number checking, stenographic proficiency, etc., help differentiate poor operatives from superior operatives.

Dexterity and speed of manipulation tests have helped in selecting skilled weavers. A threading test separated fast burlers and menders from slow ones. Quillers who do better on the job also perform the dexterity test faster.

Interest tests are valuable in picking administrative and supervisory personnel. Such tests are of value in selecting salesmen.

Tests of mechanical ability and aptitude help select better machine fixers and mechanical maintenance men. These tests also help in selecting certain types of inspectors.

Personality tests show promise in determining which employees are cooperative or non-cooperative. These tests are also helpful in picking supervisors and salesmen.

Visual tests are emerging as valuable selection devices as well as improving production on certain jobs. The results show a favorable improvement in production where screening tests and corrective methods have been employed.

The textile industry requires many types of skill in the operatives it employs. Some of these skills are accuracy and speed in hand movements, good vision and color discrimination, mechanical aptitude, clerical and bookkeeping ability, salesmanship, and supervisory ability. Most of these abilities can be rated fairly accurately by aptitude tests.

Test of Learning Ability. Mental tests or learning ability tests have been tried in industry with fair success. Harrell (9)* gave a thirty minute mental test to 41 supervisors who had been rated as to ability on a five-point rating scale, a value of three being considered satisfactory. If an I.Q. (a measure of learning ability with 100 being the average) of 101 was required, all 14 of the supervisors scoring at this point or above would have been considered satisfactory. Eight supervisors who were rated unsatisfactory by their superiors would have been rejected by this test. The other 19 men would not have been identified by this test.

Female trainees (3) selected for an intensive supervisory training program in a plant were given a learning ability test and followed up six months later. Those supervisors who were demoted by the end of the six months period were found to come predominantly from those who did poorest on the learning ability test.

One investigator (5) found that the job success of janitors could be differentiated by a learning ability test. It would appear that mental ability is a very important indicator of future performance, even in the lower levels of the semi-skilled occupations.

Another investigator (7) found 185 instances where mental tests

*Numbers refer to bibliography on page 94.

Finding a Place in Textiles

had been used to select operatives. The conclusions reached are summarized as follows:

1. "For clerical operatives intelligence tests are very useful selection instruments."
2. "For supervisors, salesmen, and skilled operatives, intelligence tests show high promise of being very useful instruments, but further knowledge of their effectiveness is needed."
3. "For semi-skilled operatives intelligence tests may prove of some value when used in combination with other tests, but as single instruments they show little promise."

Mental test scores were reported to be of slight significance for selling, but they were useful in considering individuals who were in line for promotion to sales manager (17).

Another investigator (1) found that mental test scores were of value in selecting four groups of supervisors. In a study of 99 foremen, Shuman (25) found that mental ability scores and performance ratings by management agreed fairly well with each other.

Twenty-five executives rated as either superior or average were given a mental test. The superior executives were reliably faster and more accurate on the learning ability tests than were the executives rated as average (29).

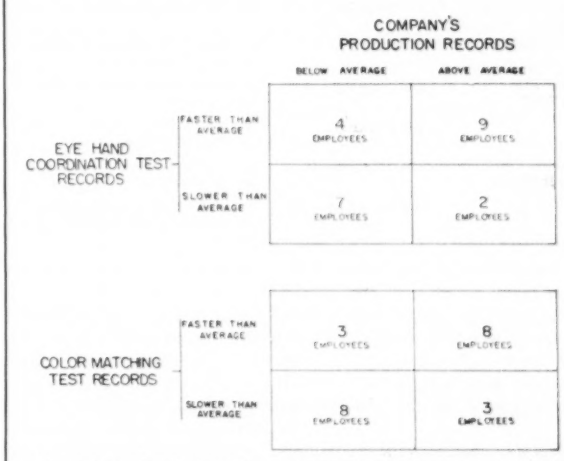
Lawshe (16) reported on a study of 176 supervisors drawn from 44 different industries. Those participating companies were asked to identify two of their "poorest first-line supervisors" and two of their "very best first-line supervisors." These men were given a short 60-question paper and pencil test of mental alertness designed for use with adults in industry and business. Stated simply, the results of the study demonstrated that insofar as these 44 plants are concerned, the higher a man scores on the test, the greater the probability that he will be considered as being one of the best supervisors. Certainly mental ability appears to be one of the common denominators of supervisory success (16) (23) (32).

Clerical and Office Personnel. Unfortunately too little attention has been given, in the past, to selecting clerical and office personnel. Very frequently a receptionist or a secretary must greet and receive important customers. Frequently she must keep them happy and reasonably contented until her employer can see them. In fact, the secretary frequently gives the customer the basic and important first impression of organization. A wide range of abilities are required for different kinds of clerical jobs and no one clerical test can be expected to be suitable for more than a very limited range of such abilities.

Learning ability tests have demonstrated their value in helping to select and place employees in clerical positions. McMurry (18) found a favorable agreement between scores on a test of learning ability and job efficiency in clerical work. Pond and Bills (24) found that applicants for certain types of

FIGURE I

PRODUCTION RECORDS OF 22 WEAVERS COMPARED TO THEIR PERFORMANCE ON AN EYE HAND COORDINATION AND COLOR MATCHING TEST



On an eye-hand coordination test, 13 employees out of 22 scored faster than average, leaving 9 employees who scored slower than average. The company's production records showed 11 of those tested to be above average and 11 below average. On a color matching test, 11 scored faster than average, and 11 scored slower than average. The company's records showed the same division in the slow and fast groups.

Results of Various Tests in Different Job Classifications

Employee	Test	Results
supervisors	learning ability	eight men rated unsatisfactory by superiors were rejected by test.
female trainees	learning ability	those demoted were poorest on test.
janitors	learning ability	job success predetermined.
clerical	learning ability	useful for selection.
supervisors, salesmen, and skilled operatives	learning ability	useful, but more knowledge of effectiveness needed.
semi-skilled operatives	learning ability	little value when used alone.
prospective sales managers	learning ability	useful for promotions.
supervisors	learning ability	agreed with performance ratings.
executives	learning ability	agreed with ratings.
supervisors	mental alertness	agreed with ratings.
cashiers	learning ability	scores correlate with number of correct transactions.
bookkeeping machine operators	learning ability	test score agreed with productiveness.
clerical operatives	stenographic test	test picked 80% of those rated satisfactory.
burlers and menders	threading test	agreed with supervisor's rating.
quillers	dexterity	agreed with production records.
packers	dexterity	agreed with production records.
supervisors	interest	best single indicator of ability.
executives	interest	agreed with ratings.
salesmen	interest	useful for selection.
machine fixers	mechanical	agreed with supervisor's ratings on job.
mechanics, and maintenance men	mechanical	agreed with supervisor's ratings on job.
inspectors	mechanical	agreed with ratings.
textile operatives	personality	agreed with company rating on cooperativeness.
supervisors and non-supervisors	personality	differentiated between the two groups.
salesmen	personality	wrong in only 7% of successful cases.
full-fashioned hosiery operatives	visual screening	25% of applicants could not meet visual requirements.
clerical	visual screening	79% of those rated high by supervisors had normal vision.

clerical jobs could be placed very satisfactorily. These investigators found that very difficult clerical work demanded people who could earn high scores on a learning ability test.

Individuals who made low scores on learning ability tests tended to remain in jobs calling for low skills, whereas those earning high scores tended to be promoted to more responsible jobs. They also reported that work calling for simple learning ability and many repetitive operations or procedures seem to cause a very high turnover among individuals with superior learning ability.

In a study of office managers, those who made the most mistakes and were criticized most often by management were those individuals who had also missed the most items on learning ability tests (26). In a similar study, employers rated their clerical staff as either satisfactory or unsatisfactory and then gave them a learning ability test. The results indicated that a score of 25 on this rate of learning test actually selected 86 per cent of the group designated as being satisfactory in their work.

Cashiers' efficiency also appears to be related to performance on learning ability tests. Clark (4) found a favorable agreement between the number of correct transactions made per day by cashiers and the kind of scores they earned on learning ability tests.

Bookkeeping machine operators were rated by their supervisors on productiveness and then given a learning ability test. A positive agreement was found between their performance on the learning ability test and their productiveness in operating bookkeeping machines (12) (23).

In a study of 43 clerical operatives, Giese (6) reported that a stenographic test picked out 80 per cent of those individuals who were rated satisfactory in job performance by their supervisors. The test picked 78 per cent of those clerical operatives rated unsatisfactory by their supervisors after three months of service.

Dexterity and Speed of Manipulation Tests. Twenty-two textile weavers (loom operators) were given a series of dexterity tests. The results of these tests were divided as shown in Fig. 1 (on page 91).

In accordance with Fig. 1, the hourly earnings of the group, which was above average on the test, was $1.23 per hour, whereas the group scoring below average on the test earned $1.13 per hour. In the color-matching study, those above average on this test earned $1.22 an hour in contrast to the $1.15 an hour earned by the group scoring below average on their test performance (23).

In another study (23) a threading test requiring the employee to thread a string through metal eyelets of different sizes differentiated quite well between successful burlers and menders as rated by their supervisors.

A pilot study on 28 quillers in a Burlington Mills (N. C.) plant seemed to indicate that production and speed on a dexterity test (as-

sembly) had some relationship to each other. The better the production of an operative, the faster he performed the assembly test (30).

Packers rated against actual production records could be differentiated by a dexterity test. Employees who scored above average on the test were the best packers (2).

Interest Tests. The research to date indicates that interest tests can contribute substantially to the selection of administrative and supervisory personnel.

In a study of 200 supervisors Achard and Clark (1) reported that an interest blank was the best single all-around indicator of supervisory ability they had found.

An interest test differentiated between executives rated as superior and average. The difference found could not be due to chance factors (29).

Husband (13) reported that the Strong Vocational Interest Blank was the one test which does show promise in helping to select better salesmen.

Tests of Mechanical Aptitude and Ability. A study was made of the way cotton mill machine fixers answered a fifteen item test and the way their supervisors rated their job performance. This study showed a tendency for those who did well on a mechanical test to do well on the job as machine fixers (10) (11).

In another investigation the scores of a group of mechanics and maintenance men on a mechanical adaptability test agreed remarkably well with the ratings their supervisors gave them on efficiency (15).

Inspectors were given a mechanical test requiring them to do much detailed following of direction, accurate copying, etc. The test results agreed very closely with their ratings as inspectors (2).

Personality Tests. It seems that too little has been done in this field to date. However, the meager results reported are encouraging. In one textile plant a study of 43 textile operatives revealed that a personality test picked correctly 19 out of 21 employees whom the company had rated satisfactory on cooperativeness. The test picked out 11 of 22 operatives found unsatisfactory on cooperativeness (22).

In another field, a personality test appeared to differentiate well between non-supervisors and supervisors. The supervisors earned scores which indicated that they were less unstable and more self-confident than the non-supervisory group (8). In another study, good supervisors scored better on a personality test than their colleagues who were rated poor in supervisory ability (1).

Personality tests have proved to be of value in selecting salesmen. McMurry (19) reported that when personality tests were combined with a clinical study of 250 salesmen he was able to get results as shown in Fig. 2.

Visual Tests. Tests of vision have proved valuable for both selection and placement. Good vision was related to ability as a weaver in a woolen mill. In fact, the test (23) employed to measure visual ability of loom operators was the best single instrument found to differentiate workers who were above average or below average in hourly earnings. The accompanying table shows results of the visual test.

THE VISION OF LOOM OPERATORS COMPARED TO PRODUCTION RECORDS

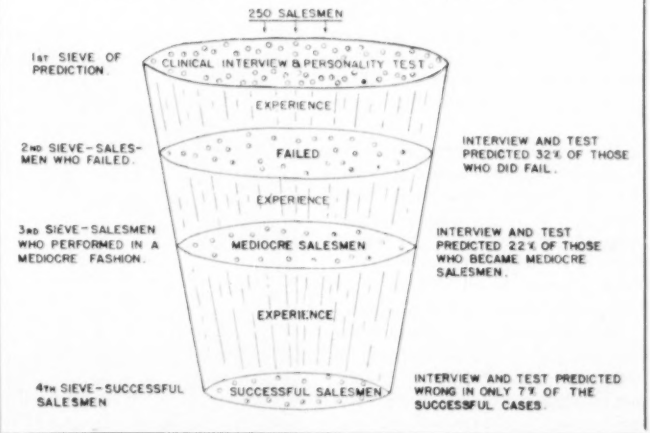
Vision Test	Company Records of Production	
	Below average	Above average
Normal	1	10
Below Normal	10	1

The Blue-Bell, Inc. reports that a visual screening test in conjunction with dexterity tests increased their efficiency in selecting and training operatives 18.6 per cent. They add that these tests "gave a saving of $80.65 on each of 198 new employees employed during 1947." They also indicated (20) (34) that turnover figures dropped 5.7 per cent in 1946 and 3.9 per cent in 1949.

The use of visual screening tests in the Shannon Hosiery Mills (28) revealed that 20 to 25 per cent of the applicants could not meet the basic visual requirement set by the plant for full-fashioned ho-

FIGURE II

PREDICTING SALESMANSHIP—WHAT HAPPENED TO 250 SALESMEN?


250 SALESMEN
1st SIEVE OF PREDICTION
CLINICAL INTERVIEW & PERSONALITY TEST
EXPERIENCE
2nd SIEVE—SALESMEN WHO FAILED.
FAILED
INTERVIEW AND TEST PREDICTED 32% OF THOSE WHO DID FAIL.
EXPERIENCE
3rd SIEVE—SALESMEN WHO PERFORMED IN A MEDIOCRE FASHION.
MEDIOCRE SALESMEN
INTERVIEW AND TEST PREDICTED 22% OF THOSE WHO BECAME MEDIOCRE SALESMEN.
EXPERIENCE
4TH SIEVE—SUCCESSFUL SALESMEN
SUCCESSFUL SALESMEN
INTERVIEW AND TEST PREDICTED WRONG IN ONLY 7% OF THE SUCCESSFUL CASES.

siery manufacturing operations.

Visual screening tests differentiated well between good and poor producers in the clerical field. Clerical operatives rated as high producers by their supervisors were found to have normal vision in 79 per cent of the cases. In contrast to the high producer the poor producers met the minimum visual standards in only 21 per cent of the cases (27).

In a job calling for prolonged visual concentration, 43 per cent of those employees whose visual test scores placed them in the desirable range, remained on the job more than eight months, while 57 per cent remained on the job less than eight months. However, only four per cent of the individuals whose visual test scores fell in the undesirable classification remained on the job more than eight months while 96 per cent remained on the job less than six months (14).

As a direct result of a vision program Magnet Mills, Inc., saved $9,000 in training costs in two years. In addition to the saving in training costs the mill found 35% to 50% less absenteeism among employees who had proper eyesight (34).

One plant reported that those employees whose eyes met good visual standards constituted an overwhelming majority of the employees who were making payroll bond deductions (33).

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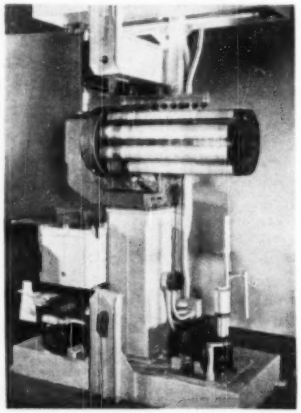
Rayon Spinning Process Said to be Revol utionary

A new rayon spinning and processing machine has been placed on the market by its inventor, Harry A. Kuljian, a Philadelphia engineer.

The outstanding feature claimed for the Kuljian machine is the fact that a process which now takes from four to five days by the customary "pot-spinning" method—from the viscose solution to the finished yarn on the bobbin—is actually completed in 3½ minutes.

According to the inventor the finished yarn is more uniform, of superior quality, better for dyeing, and easily adapted, by simple controls, to any desired combination of properties for varying types of yarn to meet specific needs.



Other advantages cited for the process are: less capital investment, less plant, less time for installation, cheaper maintenance, lower production cost, less handling, greater output per spindle, elimination of damaged yarn, higher quality yarn at less cost, quicker change-over for varying types of yarn, less cost and less trouble for plant expansion, and more efficiency in the subsequent stages of manufacture of rayon products.

Left, the Kuljian machine spins and processes rayon in 3½ min.

A Practical Quality Control System

A USEFUL SYSTEM that has proved its merit through application in controlling and improving quality in weaving and preparatory departments. The system includes an inexpensive program designed to help reduce seconds and operating costs.

By FRANK L. BYRD

QUALITY CONTROL systems in many mills do not fulfill the desired objectives because of the structure and application of the system. A rigid selection of raw materials is necessary to obtain the uniformity demanded in the finished fabric, and processing the raw material should be controlled to a standard. Numerous mills are paying dearly by not giving their opening and picking equipment the attention it deserves. This is more obvious in processing with few draftings and doublings. Modernizing in most instances does not mean increasing the labor force nor additional machines; however less waste will be produced on processing machinery if sufficient machines are in operation to prevent having to run them on an overloaded basis. It is well worthwhile to add a few machines to prevent overloading.

Compiling Data. Any measure of performance must be gauged by a yardstick of dependable data. The fabric reflects its true quality and points to the cause or source of defects in the various processes.

Cloth inspectors, who are alerted to note repetitive defects, are most helpful in successfully executing any quality control system. Recurring loom failures, if not recognized by the weaver or loom fixer, are first discovered by the cloth inspector. The inspectors are conscious of the additional work they are required to do if any loom is a chronic offender. Additional time is required for the inspector to report jerks-in; ends out due to the warp stop motion not working; thick places due to the let back motion being set too open; kinked filling due to excessive power on the pick; oil spots to be washed out; and supervision expects the inspector to maintain his production in addition to reporting his observations of defects. Of course, such supervision is justified when cost figures are set to standard and the standards are not flexible to take care of an unexpected wave of bad

Fig. 1.

DAILY INSPECTION REPORT

MILL DATE

STYLE WIDE LOOM NO. YARDS INSPECTION NO. GRADE

Date
Date Duffad
Loom No.
Fabric No.
Yards
Inspector's No.

Weaver's No.
Shift No.
Loom No.
Yards
Style and Pattern
Date

GREY INSPECTION REPORT

1* Broken Picks
2* Jerks In
3* Kinky Filling
4* Sloughed Yarn
5* Double Shots (Misplicks)
6* Shuttle Bounce
7* Floats
8* Ends Out—Flats
9* Thick Place
10* Thin Place
11* Wrong Draw
12 Temple Marks
13* Slack Warp End Yds.
14 Slubs—Warp
15 Slubs—Filling
16 Reed Marks and Misreed
17* Runners Yds.
18* Oil or Grease Spots
19 Oily Warp End
20 Soiled Filling
21* Wild Filling
22* Odd Ply or Mixed Filling
23* Warp Cloth
24* Buttonhole Selvage Yds.
25 Draw Backs
26* Doublings
27 Uneven Filling (Corkscrew)
28 Singling (Light yarn)
29* Long Ends on Face
30 Slip Knots
31 Spinners Goods
32* Breaks Out
33* Skipped Over Filling
34* Odd Ply Warp

TOTAL

* Majors Yds. Gr. Yds. Gr. Yds. Gr.

Form 822-A

CLOTH TAG

Loom No. ..... O/N .....

B/N ..... Inch

Oz. ..... Grade .....

Yarn Filling ..... Picks .....

Yarn Warp ..... Sley .....

Stripes .....

Date .....

Yds. ..... Gross ..... Net

Lbs. ..... Std. ..... Net

Lbs. ..... Hy. ..... Light

% ..... Hy. .....

Slasher Set No. .....

Package No. .....

Inspector .....

Picks Per Inch .....

Width—Inches .....

INSPECTION TIME

	Hrs.	Min.
Start		
Stop		
Start		
Stop		

Fig. 2.

work or defective cloth.

A satisfactory grey inspection report (see Fig. 1) has been worked out and applied in a mill producing non-dyed cotton, rayon, and worsted blend fabrics. A similar form, with some modifications, may be adapted for almost any type of woven fabrics. This grey inspection report is the basic form used in an effective control system; other forms are the outgrowth of the grey inspection report. Defects from all departments are fairly well indicated on this inspection report, and unusual defects can be written in and checked thoroughly in applying the plan. Adherence to the follow-up procedure permits improvement in any department with a minimum of delay.

The form (Fig. 1) is perforated to permit dispatching portions of it to weavers, loom fixers, battery fillers, or second hands on any shift and in any department where bad work or defects are made. The offending loom can be designated, and the defects are keyed by a numerical symbol so they can be traced.

MAJOR DEFECTS DISTRIBUTION IN ROLL OF CLOTH

	@	Yds.	@	Yds.	@	Yds.	@	Yds.	@	Yds.	@	Yds.	@	Yds.
Broken Pick														
Broken Pick														
Breaks Out														
Double Shot														
Thin Place														
Thick Place														
Ends Out-Flats														
Oil Spots														
Floats														
Runners														
*Kinky Filling														

Fig. 3.

Cloth Tags and Inspection Procedure. Each roll or cut of cloth is identified by marking the butt end to show the loom number, style, width, date of doffing, and the slasher set number. This information is entered on the cloth tags (Fig. 2) by the stitcher operator who sews the rolls together. The cloth tags supply data of value in keeping records of stocks and orders.

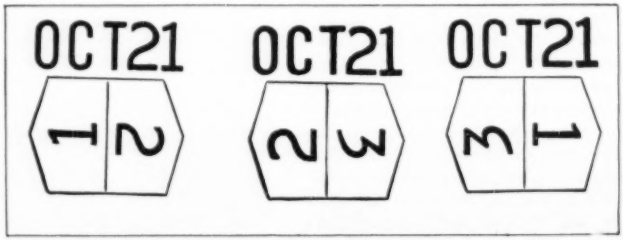
The distribution of major defects is recorded on the back side of the cloth tag (Fig. 3). These data are helpful in selecting rolls of cloth which can be partially salvaged from the seconds classification. Also, the list of major defects is helpful in reducing seconds by showing the record and the cloth to weave room personnel. A negligible amount of time is required to put the information on the tags, and it is of value when certain rolls of fabric are requested for a second inspection. A record of the time consumed in inspecting the yardage of cloth in one roll as compared with another is useful in checking costs.

Placing Responsibility. Spare loom fixers and weavers are often responsible for poorly made cloth, and "passing the buck" is practiced frequently in such instances. Sometimes the operatives may deny that they produced a given lot of seconds unless there is a positive system of operator identification.

A block type rubber stamp, with easily legible letters, can be used to apply the shift number and date to the cloth selvage. A fugitive tint should be used for this purpose. The fugitive tint is washed out in the finishing operation, and no ill effects result from this means of identification. The best place to apply the shift identification is on the battery side of the fabric, provided the mark faces the inspector when the cloth reaches him.

Sample shift marks are shown in Fig. 4, 5, and 6. These marks are used for first, second, and third shift operations. Stamping is done by someone other than weavers or loom fixers. Operatives see the absolute fairness of this method of identification, and it does eliminate the possibility of argument regarding errors. In the old method of cloth marking, many weavers had to assume the blame

Fig. 4. Fig. 5. Fig. 6.



where others failed to mark their cloth, and there was dissatisfaction when spare weavers were allowed to use a regular weaver's mark. Where arguments are avoided, reprimands are much easier to administer, and employee relations are automatically improved.

Follow-Up. Proper indication of the quality of cloth being made on each loom is accomplished best by inspecting the cloth in the sequence it was woven. This can be done by rewinding the rolls, and in this manner, current loom production and performance is revealed when a roll is completely inspected. The last cloth made is evidence of the condition of the loom and the amount of care exercised by the weaver.

Immediately after a cut of cloth has been inspected, the data carried on the grey inspection report (Fig. 1) is summarized, and entered into the master quality control loose leaf ledger. This ledger contains a history of performance form (Fig. 7), and there is one data sheet for each loom. Each data sheet provides a record of performance on each loom, loom fixer, and weaver. These records can be retained safely by placing them in a binder to preserve them. Old sheets can be kept in the weave room overseer's office binder for his reference and use.

Looms producing seconds are usually in the minority. In testing weave room accessories and supplies, the records serve as an accurate basis for comparison. Quality of leather, bristles, fur, lug straps, and picker sticks have been determined by the data gathered and compiled on the history sheets in the quality control ledger. Excessive power, high twist in filling yarns, loops, kinky filling, shuttle bounce, jerks-in, and broken picks are made evident and brought to light quickly by using the quality control ledger and the grey inspection reports.

The amount of time consumed in recording this information is negligible when compared to the market price of the product. If further information is desired, processing through tabulation machinery is possible.

	Style No.		
	Date Doffed		
	Date Inspected		
	Inspector's No.		
	Total Yards		
	DEFECTS	No.	YDS.
1	Broken Picks		
2	Jerks In		
3	Kinky Filling		
4	Sloughed Yarn		
5	Double Shots (Mispicks)		
6	Shuttle Bounce		
7	Floats		
8	Ends Out Flats		
9	Thick Place		
10	Thin Place		
11	Wrong Draw		
12	Temple Marks		
13	Slack Warp Ends Yds.		
14	Slubs—Warp		
15	Slubs—Filling		
16	Reed Marks and Misreed		
17	Runners Yds.		
18	Oil or Grease Spots		
19	Oily Warp Ends		
20	Soiled Filling		
21	Wild Filling		
22	Odd Fly or Mixed Filling		
23	Wavy Cloth		
24	Buttonhole Selvage Yds.		
25	Draw Backs		
26	Doublings		
27	Uneven Filling (Corkscrew)		
28	Singling (Light Yarn)		
29	Long Ends On Face		
30	Slip Knots		
31	Spinners Gouts		
32	Breaks Out		
33	Skipped Over Filling		
34	Odd Fly Warp		
	Total Defects		
	Loom Fixer Defects		
	Fixed Weaver Defects		
	Spinning Defects		
	Carding Defects		
	Weavers Defects		
	Twisting Defects		
	Yards Seconds		
	Grade	Normal	
	Weaver's No.		
	Quality Ticket No.	A-7645	

Fig. 7.

Quality tags (Figs. 8, 9, and 10), are issued for each roll of cloth as follows:

A - White = acceptable
B - Orange or Amber = border line
C - Red = condemned or seconds

Currently accumulated data are listed on the reverse side of these tags as shown in Fig. 11. The tags can be filled in rapidly from the grey inspection report or the quality control ledger. Trends of quality can be noted from the

A No. 2644

QUALITY TICKET

Loom No. .....

Style No. .....Width.....

Date Doffed.....

Date Inspected.....

Inspector.....

Weavers' Nos. .....

Yards.....

Slasher Set No. .....

(Defects Listed on Reverse Side)

Fig. 8.

Fig. 9.

B No. 432

QUALITY TICKET

Loom No. .....

Style No. .....Width.....

Date Doffed.....

Date Inspected.....

Inspector.....

Weavers' Nos. .....

Yards.....

Slasher Set No. .....

(Defects Listed on Reverse Side)

The Last Roll of Cloth Made on this Loom was of

BORDER LINE QUALITY

tags which indicate the beginning of trouble when a loom starts producing border line goods or seconds.

Major and Minor Defects. Defects can be rated according to the seriousness of the final effect on the fabrics produced and marketed. Any defect caused by carelessness or neglect by any operative or machine should be termed a major defect, and steps should be taken to prevent further recurrence. Many rolls of cloth classed as seconds can meet the specifications of a higher grade, provided certain defects are corrected. Through studying the position of certain major defects

C No. 4092

QUALITY TICKET

Loom No. .....

Style No. .....Width.....

Date Doffed.....

Date Inspected.....

Inspector.....

Weavers' Nos. .....

Yards.....

Slasher Set No. .....

(Defects listed on Reverse Side)

The Last Roll of Cloth Made on This Loom Was

SECONDS

Fig. 10.

(Fig. 3), some portion of fabric can be removed, and a worthwhile percentage of the rolls can be salvaged into a better classification. The additional work adds to the cost of inspection and operating the cloth room, and the cloth should be credited with the additional costs.

Specifications set forth the tolerance of major or minor defects per 100 yards of fabric, depending upon the type of cloth and other details.

The number of minor defects constituting a major defect may be determined by noting the relation of the number of defects permitted in first quality cloth to those in seconds.

Graded Seconds. There are five generally accepted grades of cloth in the wool and worsted trade. These are as follows: normal; custom A, B, C, and as are.

Odd ply warp ends, slubs, wavy cloth due to thick and thin places, and broken picks contribute to such segregation in grading. The defects are judged by the finishers, spongers, and finally in some instances by an arbitrator. These ratings are such that a special study over a prolonged period is necessary to determine the acceptable standards.

Roll Lengths. Longer cuts, or larger rolls from the looms have

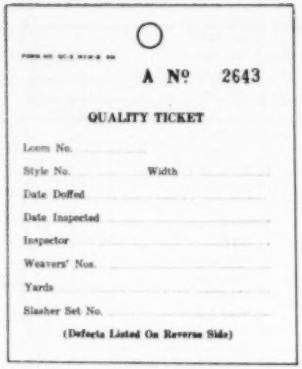


Fig. 11.

many advantages and are usually most pleasing to the majority of cutters. These afford worthwhile savings to the mill in reducing scraps, handling, and damaged or soiled places. Higher percentages of loom efficiency are usually in evidence.

The custom of doffing cloth from the looms in 70 to 120 yard cuts is rapidly being exposed as an economic loss. The theory that rolls doffed short allows the fixers to discover faulty looms earlier is being replaced with methods to prevent the looms from beginning to make seconds.

The practical approach is to make the rolls as long as possible, but not to the extent of loosening the take-up roll gudgeons or endangering the safety of personnel or handling equipment. Mechanical means of handling larger loom and section beams can be employed to reduce costs.

Constant vigil must be kept to improve or maintain quality. If better quality cloth is produced, loom efficiency must be high. If better cloth is made, less time is required for inspection and burling. Baling the cloth and making it ready for market takes less time, and the final result is lower costs throughout the mill.

The vital secret of gaining the advantage of a practical and simple system of quality control that functions properly, is to keep abreast of the cloth as the production is delivered to the cloth room. Yesterday's cloth must be inspected today if the pulse of quality is to be properly taken.

Use of Solvents in "Low Places" Requires Extra Care

Because they are heavier than air, solvent vapors have a tendency to collect at floor level, in the bottom of tanks, pits, and other low places. To avoid exposure to excessive concentrations of vapor in such places, special precautions must be taken—otherwise, serious illness may result:

(1) Anyone assigned to work with solvent in an enclosed space, such as a tank or pit, or a tank that has contained solvent, should be instructed to wear a supplied-air or self-contained oxygen respirator. In addition, a life-line should be tied around his waist with the other end in the hands of a watcher who stands outside the work area. The man should be instructed never to remove the respirator while working. In case of fatigue, he should leave the work area and go into fresh air where the respirator can be removed in safety.

(2) When floors, room corners, the underside of equipment, etc., are cleaned with solvent, as much ventilation as possible should be obtained by opening all windows, doors, etc. Fans that blow the solvent vapors away from the worker's breathing zone may be employed. If it is impossible to obtain ventilation in these ways, a respirator should be provided.

(3) Workers who use solvent for occasional brief cleaning jobs, especially on floors or low parts of equipment, should be instructed not to bend over the work and to avoid inhaling the solvent vapors as much as possible.

(4) Early symptoms of vapor poisoning include nausea, dizziness, headache and fatigue. If they occur, the man should cease work immediately and go out into fresh air. —Safety Research Institute.

The Harris Color Stripping Process

A discussion of the Harristrip process for effectively stripping wool waste without serious damage to the fibers.

By MURRAY D. EWING
Industrial Market Dev. Manager
Alexander Smith & Sons Carpet Co.

GENERAL information regarding this development was published in May 1950 issue of TEXTILE INDUSTRIES *(see page 123). Presented here is more detailed and technical information on this new process.—Eds.*

The Alexander Smith & Sons Carpet Company of Yonkers, New York, has obtained the right to sub-license woolen manufacturers for the use of Harristrip. The Harristrip process permits the effective stripping and reuse of wool wastes in qualities and amounts hitherto impractical because of the serious amount of damage done to the wool fiber by normal stripping methods.—Author.

Chemical Process. Essentially the Harris process protects wool fibers by the chemical replacement of the extremely vulnerable disulfide link by a virtually completely stable substitute linkage. Once this has been done the material may be subjected to rigorous stripping action without further damage.

The rebonding is achieved through the use of ethylene dibromide in an alkaline solution. Thus a mild strip takes place in the course of this protective step. Having protected the fibers, it is then possible to follow with any one of several different modifications to achieve best results with different types of dyes.

Certain factors tend to influence this treatment, namely the dyestuffs contained in the material to be treated and the extractable oil content which should be at 2% or less. Generally speaking, however, the treatment is quite uniform, producing closely similar degrees of whiteness on similar stocks.

Mechanical Process. One of the most significant factors of the Harristrip process is the fact that little or no equipment modification is necessary for its application. Ethylene dibromide is toxic to about the same degree as carbon tetrachloride; therefore certain safety precautions must be observed. The only major item in this respect is a hood placed over the kettle or overflow tank to exhaust the undesirable vapors.

Many applications of Harristrip have been attempted on a wide range of standard dyehouse equipment without encountering any particular problems. Further application into the continuous stripping field is being studied, and there is a possibility of achieving satisfactory results in removing color from piece goods.

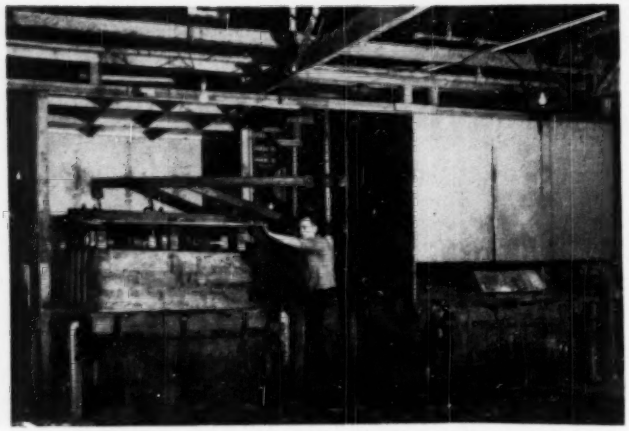
No additional instruments are needed in the process works, and the temperature ranges between 190 degrees and boiling. It is necessary to achieve a pH between 7.5 and 9.0 at the beginning of the rebonding step for which a pH paper test provides adequate control.

Used in wood, copper, or stainless steel kettles, no noticeable erosion has taken place on the equipment of the Smith Company where this process has been in use for several months. In addition, normal waste disposal methods are sufficient in most localities, as most of the chemicals are exhausted or neutralized in the course of the process.

Cost Data. Harristrip has been found to compete very closely with the normal commercial strips now on the market. Depending on the modification used, chemical costs tend to run somewhere between 2½ and 3½ cents per pound. It is possible to eliminate some of the procedures which may be currently in use, thereby effecting a savings in time and materials which may overcome any additional chemical costs.

Royalties are being set up to fit the needs and economies of the various segments of the textile industry which may find this process useful. These will tend to vary with the value of the process to the company involved. In view of the generally tight condition of the world wool market, the possibility of increased use of reclaimed wastes in a condition very nearly equivalent to virgin stock at a significantly lower price should be interesting to almost all users of wool fibers. A point of significance is that the fibers, having been protected, are less vulnerable to the destructive effects of dyeing and scouring than the virgin wool with which they are used. This permits increased percentages of waste in the blend and in many cases should allow companies to put Harristrip wastes to work where previously they had demanded pure virgin stock.

Test Data. In comparing similar



Two Hussong type kettles converted for use with the Harristrip process. Note the plywood hoods in both loading and operating positions. The hoods were added to the equipment especially for the Harris color stripping process.

stocks Harristripped and those treated by other commercial stripping methods, the Harristripped product is firm, strong, and resilient, as opposed to harsh brittleness obtained in conventional stripping. The difference is less apparent when oils or softening agents are applied, but they become obvious again on redyeing or further processing.

As damage to the cystine linkage in the wool fiber is evidenced by loss of resilience and tensile strength, Harristrip can be evaluated on any testing device normally used to measure these properties. Specifically, the Smith Company has noticed a very slight increase in wear life of Harristripped fibers as opposed to normal virgin fibers as measured on carpet samples subjected to the Bureau of Standard wear test machine. The tensile strength of fibers is unimpaired after Harristrip unless extensive damage to the fiber took place prior to this process.

A good measure of the processing damage undergone by a fiber is the determination under standard conditions of the solubility of wool fibers in an alkali solution. Virgin wool fibers show alkali solubility values generally of between 8 to 12%. Wools which have been acid dyed tend to receive a small amount of damage, raising their solubility to 12 to 14%. Alexander Smith has measured the alkali solubility values of stock treated by various commercial strips and has found that percentages in excess of 20 are obtained. Values of 30 and 40% are not uncommon. On the other hand, results on acid dyed stocks before and after Harristrip have remained within the normal limits of error for the test and in many cases have shown considerable improvement.

It has been determined both in the laboratory and through considerable Smith manufacturing experience that Harristrip stock has the same affinity for dyestuffs as untreated wools. In addition, it is possible to redye and otherwise process Harristrip wastes to an extent considered impossible before, a fact which considerably broadens the possibilities for increasing the use of waste wools.

Advantages. The use of Harristrip has meant several tangible advantages to Alexander Smith in addition to lower blend costs. An example is the fact that the practice of separating thread and similar wastes by color for reuse could be discontinued, with attendant manhours and space conservation. It may be practical to strip accumulated yarns produced in excess of specific production demands, which would permit a reduction in yarn inventory and greater flexibility. Other intangible benefits are anticipated.

The application possibilities in other segments of textiles are even more significant. Makers of low cost apparel fabrics may be able to increase their use of knits, clips, and other wastes. Integrated woolen mills will find it possible to reuse their own waste products as never before. Skein, top, and eventually piece dyers will be able to correct mistakes by the use of Harristrip without the usual degradation which occurs in redyeing. It may be desirable to protect certain virgin wools with the Harris rebonding process to help prevent fiber breakdown and strength loss in manufacture.

Limitations. Certain limitations exist and should be noted. Although it is possible to achieve greater whiteness in many cases through its use, Harristrip cannot remove many dyestuffs which are generally considered unstrippable; chrome black is an example of this problem. There are also problems in handling vat dyes which are yet to be solved. It must be remembered that any improvement in color level constitutes an advantage in terms of the colors to which a stripped stock can be redyed. In many instances a light shade may not be particularly desired, but the protection in redyeing to a darker shade might itself justify the cost of Harristrip.

The principal economies exist in the possibility of lowering the cost of the wool blend. In the carpet industry for example, the virgin wool blends cost around 70c per clean pound. Even small percentages of Harristripped waste, averaging perhaps 35c per pound, can add up to considerable raw material savings in the course of a year. In addition, it is possible that a significant uptrend in the use of waste fibers might have a loosening effect on the wool market in general by decreasing demand for virgin wools. This is applicable to all grades because wool is in very short supply throughout the world.

Alexander Smith has laid out a program for handling inquiries, and interested companies are invited to submit samples for tests.

Soiled bobbins in trays are brought to the washing machine. One operative keeps the bobbin hopper full, and another operative (left) puts cleaned bobbins back on trays and returns them to production.

Washing Bobbins at Hillcrest

Bobbin washing machine in use at Hillcrest Throwing Plant does a better and faster job than was possible using manual methods.

EXCLUSIVE

Staff Prepared

SINCE July, 1949, a new and unique bobbin washer has been used at the Hillcrest Throwing Plant of Burlington Mills Corp., High Point, N. C. It has only been for the past few months, however, that the machine has seen regular and extensive service.

The design of the machine is quite similar to that of the Nash Bobbin Sander, the manufacturer having substituted a revolving brush and toweling in place of the sandpaper; but there are a number of other design changes involved. The principal parts of the washer are: a pair of revolving discs on which are mounted ten pairs of headstock and tailstock spindles; a chain driven revolving brush; and a drying arrangement consisting of a length of toweling wound between a pair of rolls, and leather tipped side shoes and pressure pads which press the toweling against the bobbins as they pass through the machine.

In operation, bobbins are fed into a hopper which is so arranged that the bobbins are fed to the machine one at a time. When in position at the mouth of the hopper, the next pair of spindles on the revolving discs move toward each other and pick up the bobbin, holding it so that it will revolve on its own axis. The accompanying illustrations show how the bobbins are supported between the pairs of spindles.

Automatically, the bobbins are moved upward and into contact with the revolving brush. This brush scrubs them thoroughly with a cleaning solution, and they move on to come in contact with a towel which wipes off surface dirt and then dries them. Special leather shoes and pressure pads on the back of the towel assure a thorough drying job by fitting the towel tightly against all surfaces

of the bobbin in the machine.

After being dried, the bobbins are released by the spindles and then they drop onto a sloping runway, where they are collected and replaced on trays.

The washer is powered by a three-horsepower electric motor, and it will run at a minimum speed of 27 bobbins per minute, almost one every two seconds. It can be run much faster than this, but so far, Hillcrest has found it best to use minimum speed.

Being a new machine, there are, naturally, a few things that cause trouble. When used with winder-spinner bobbins, it can run for a good while without any need for stopping. These bobbins have a larger hole through their barrel, which makes it easier for the machine's spindles to pick them up. With iron head bobbins, however, the holes in the heads are smaller, and there is a raised boss on each end which makes it difficult to adjust the spindles so they will hit the exact center of the bobbin every time. Occasionally a bobbin fed to the machine seems to just barely miss, and the spindles do not center. When this happens, the machine must be stopped and the bobbin properly centered by hand. This is time consuming and prevents the work being done at full speed.

The master mechanic at Hillcrest is now working on this problem, and the J. M. Nash Company engineers are studying it, too. Undoubtedly, it will be cleared up soon.

Another feature in the design deserves some further thought on the part of the designers. It is now a two or three hour job to re-adjust the machine to take another type or size bobbin. The spindles, the feed hopper, the brush, and the toweling pressure pads must all be reset.

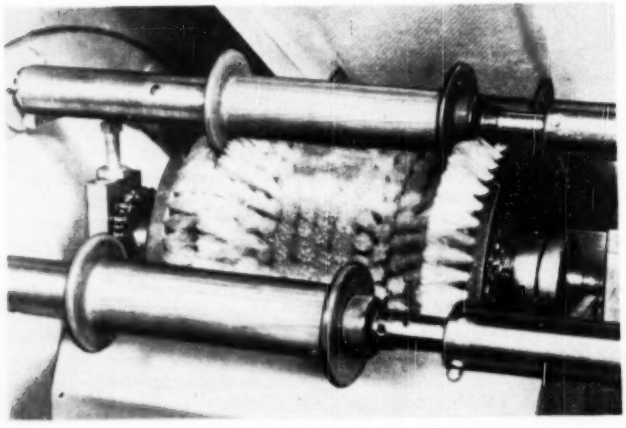
At Hillcrest, all bobbins are washed once every three months, and it takes about three weeks to do the whole job. The first two weeks are used to wash the iron head bobbins, and then the machine is reset, and about a week is given to washing the winder-spinner bobbins.

The machine permits washing of bobbin equipment quicker and at less cost than with the hand method. Training men to operate the machine is a matter of a few hours at most.

At the suggestion of the manufacturers, a trade name solvent was used at first as the cleaning solution. Several other cleaners are being tried. Also, the mill has tried several types of toweling and is not yet completely satisfied with the type being used. They are looking for a roll type towel which is heavy enough to absorb a lot of water, yet soft enough to fit around the flanges of the bobbins and get down to the barrels.

The management at Hillcrest recognizes that this new machine will be further improved, but they feel that it can be made to do a better job at lower cost than the old hand method.

Closeup showing how the bobbins are scrubbed by the revolving brush.



Product Labeling Demanded

Producers of textile products are being urged by consumer and retail groups to transmit construction and handling information through channels of sale and distribution by means of labels.

Primary manufacturers contend that such labeling will impose an injustice upon them since they can exercise little control over grey goods once it is in the hands of converters or cutters. Converters might alter intrinsic quality of goods by applying the many finishes now available, while cutters are in a position to utilize the fabric for purposes not contemplated by the mills.

The mills believe that retailers constitute the ideal focal point for passing information on to the consumer. They can force their suppliers to adhere to labeling principles. Common practice is for manufacturers to supply tags identifying their product to the market, but these tags seldom terminate on the racks and shelves of stores. The cutting trade has a tendency to omit labels on their apparel when some competitive advantage may be gained. Where a label will promote the product, one is usually used.

However, it is not good business policy under present market conditions to label the fabric of a garment which was purchased from close-outs, liquidations, and even grey goods sources. It is all too easy to misrepresent the fabric.

Also, it has been pointed out that the apparel trade is not equipped to conduct quality control tests of their purchases.

Retailers can best protect their interest and that of their patrons by purchasing from reliable sources and insisting upon labels from the cutting trade. Meanwhile, primary manufacturers can cooperate by continuing institutional advertising designed to educate the consumer.

Textile Industries *Presents a Special Feature—*

Modern Slasher Drives

Staff Prepared

EXCLUSIVE

Please turn the page

Modern Slasher Drives

There are plenty of new operating and maintenance tricks for old crews to learn when a mill switches from cone drives to one of the three newer types.

A STUDY of the design and construction of modern slasher drives will show that there are three basically different types: (1) Electrical, (2) Mechanical, and (3) Electro-Mechanical. Installations of each of these types are giving excellent service in a number of mills; each has its particular advantages; and each falls short of the ideal in some respect.

After studying the job being done by these drives in a large number of mills, it was obvious that the quality and dependability of the service secured from the drives rest principally upon the operating methods and maintenance procedure of the mills. In other words, to get good service from a drive, the operating crew must know how to run the slasher correctly; the maintenance crew must know how to keep it running.

1 Multi-Motor Electric Drives

Design and Construction. It is important that the operating crew know something of the design and construction of the electrical drive before they attempt to operate it. This is particularly important for the maintenance crew before they set to work to keep the drive in running order. It is also true that for many years the preponderance of equipment in the mill has been mechanical rather than electrical, and because of this, the average mill maintenance man is primarily a mechanical rather than an electrical expert. He finds that he can read blueprints with ease, but he may have trouble with wiring diagrams.

Fortunately, there is not much in the design of the electrical slasher drive with which the mechanical man is unfamiliar. This drive consists essentially of several individual, adjustable speed d-c motors; a motor generator set; a rotating type control; and a control panel which includes a rectifier tube (or metallic rectifiers) and rheostats.

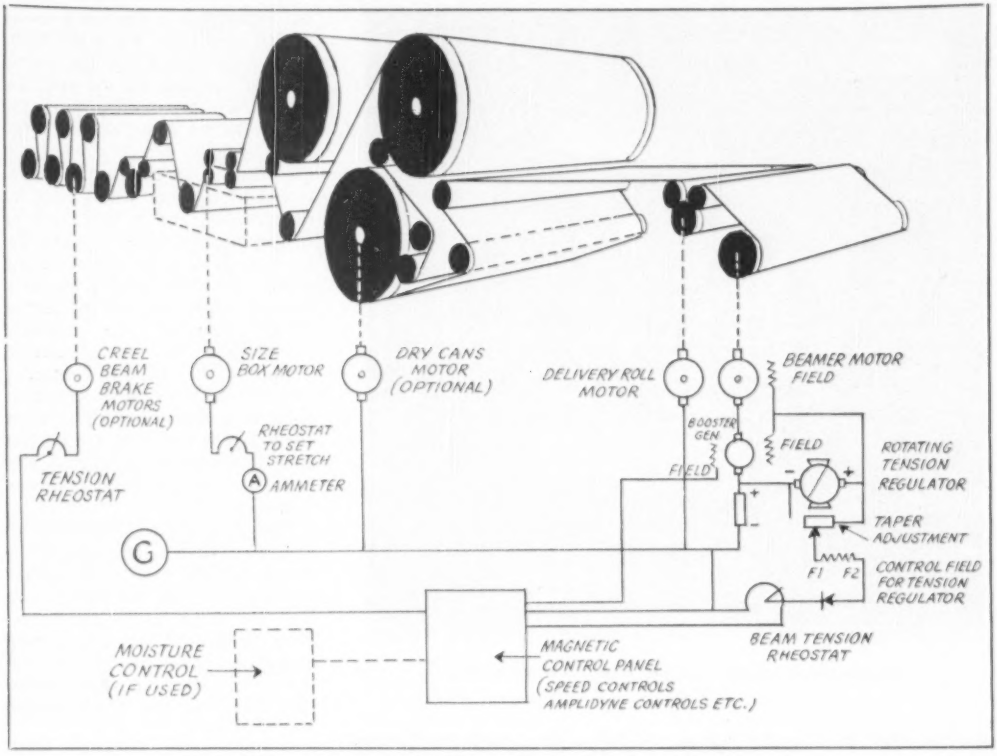
The adjustable speed motors are used to drive the size box rolls, the delivery roll, and the beam. Other motors may be used to drive the dry cans if desired. A motor-generator, which is frequently placed in the maintenance shop or in some other location outside the slasher room, takes alternating current from the outside supply and converts it to direct current for the drive motors. Using direct current motors to drive the slasher, it is a simple matter to vary the speed.

Since all of these motors are powered from the same generator, their speed may be controlled by a field rheostat on the generator. This is a motor driven rheostat so that it may be set to "full speed," "creep speed" or "stop" by punching a push button. The basic running speed is set manually, and it may be varied for different conditions or different counts by turning a dial on another rheostat.

An ammeter and a small field rheostat are connected with the size box motor. Stretch between the size box and the delivery roll is indicated on this ammeter. It shows whether or not the size box motor is carrying its proper proportion of the load, and if not, conditions may be changed by adjusting the rheostat.

For example, if there is too much stretch, this means the delivery roll motor is pulling too hard while the size box motor is holding back. This relationship will show on the ammeter. An adjustment of the rheostat will make the size box motor take more current and reduce the stretch slightly. However, once the desired stretch is established, it is seldom necessary to change the settings. The reading on the ammeter will show that the proper stretch is being maintained.

The controls used to go from "stop" to "creep" to "full speed" are also relatively simple. One button, usually labeled "Off," cuts off the beamer motor, but it is interlocked with the control so that the beamer motor will not be cut off unless the slasher is either running at creep speed or is stopped. An "On" button energizes the beamer motor, and it is effective in energizing this motor only when the slasher is stopped or running at creep speed. Pressing the "Stop" button brings the slasher to a stop, leaving a slight current on the beamer motor. This permits the operator to keep a tension on the beam while the slasher is not running, for this drive does



Schematic diagram of typical multi-motor electric slasher drive.

not use a friction clutch on the beamer. The "Slow" button causes a small excitation to be supplied to the main generator so that the slasher may be driven by all of its motors but at a low, creep speed. Pushing the "Fast" button operates the small motor on the rheostat in the control panel to move it up to full speed position, and the slasher then runs at the speed dictated by the manually set rheostat.

Although these features of the electrical, multi-motor slasher drive are easy enough to understand, the beamer drive brings in several complications. It is readily recognized that this beamer motor cannot run at a constant speed even when the slasher is delivering a constant yardage per minute. The beam must turn more slowly when it is full of yarn than when it is empty. Given a constant linear delivery speed, the speed of the beam must vary indirectly with the diameter of yarn beam being built up.

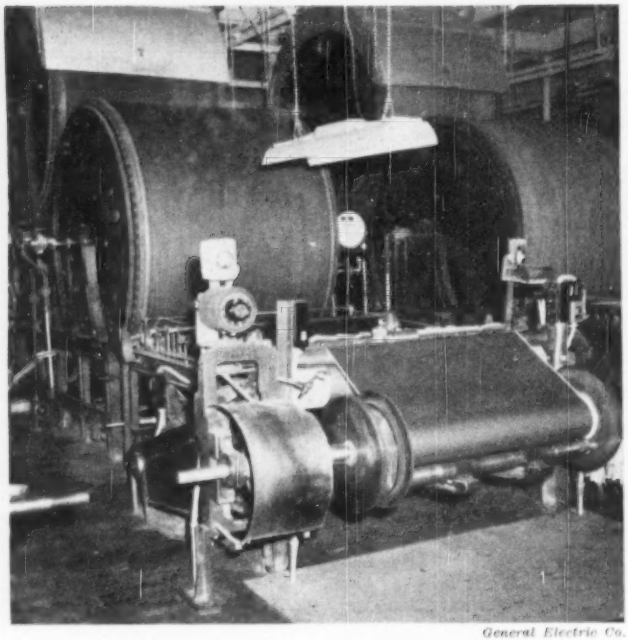
To handle this variation in beam speed, another set of controls is included in the drive. The heart of this arrangement is a rotating regulator which Westinghouse calls a "Rototrol," General Electric calls an "Amplidyne," and Reliance calls "VSR." This regulator permits a constant power input to the beamer motor, and hence, the tension between the delivery roll and the beam also remains constant even though the speed of the beam varies.

Another small booster generator to supply additional current to the beamer motor is usually included, and several other devices are used to assure constant horsepower and, therefore, constant tension at the beamer. A rectifier is used in this control arrangement to act as a check valve and permit the current flowing from the rotating controller's field to the beamer motor's field to go in but one direction.

The rotating controller may be mounted on the shaft of the main motor-generator, or it may be driven by its own separate induction motor. Most of the other auxiliary devices are located in the main control panel.

Through the use of this system, the multi-motor electric drive achieves a consistent tension at the beam. Mill men report that this constant tension from minimum to maximum diameter allows a greater amount of yarn to be placed on the beam.

Operation. It is general practice to use a moisture controller with



General Electric Co.

Beamer end of slasher equipped with three-motor drive.

the electric multi-motor drive. With the moisture controller in operation and the motor-generator running, the slasher may be run at the pre-set creep speed by pushing the "Slow" button. Running at this speed, the slasher may be threaded. When the ends are through to the beam, the "Stop" button is pushed, and the ends are attached. Then the "On" button is pushed to apply power to the beam motor only, thus applying tension to the beam.

The slasher is now ready to run, and it is started by again pushing the "Slow" button and running at creep speed until the operator is sure that all is in order. Then the "Fast" button is pushed, and the slasher gradually moves up to the desired operating speed.

During normal operation the slasher is under the direction of the moisture controller, which will vary the speed of the slasher slightly, or will vary the temperature of the dry cans, and thereby maintain the proper percentage of moisture in the dried yarn. Some moisture controllers change the speed of the drive and others vary the steam pressure in the dry cans through an automatically regulated pressure valve.

When using the speed regulating type of moisture controller, a manual adjustment is necessary under special conditions. When the slasher is first started and the drums are just warming up, the moisture control will try to slow down the slasher to the speed at which the yarn would be properly dried; but the rheostat on the control is operated by a motor which runs intermittently, and it takes ten or fifteen minutes for it to move the rheostat down to proper operating speed. To avoid having the yarn beamed while too wet for ten or fifteen minutes, the operator should push the manual control button on the moisture controller and run the rheostat to its lowest point in a matter of two or three seconds. The controller is then put back on automatic, and it gradually finds its proper point for correct operation.

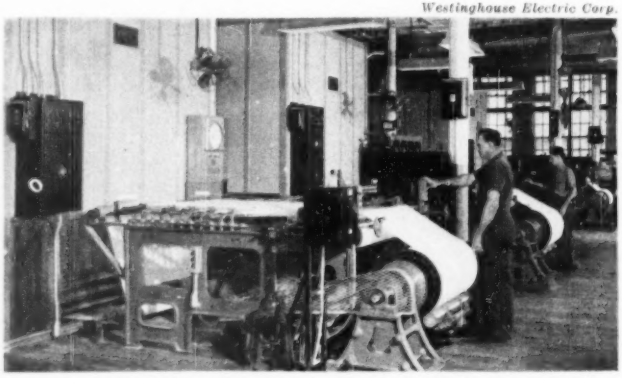
Should it become necessary to stop the slasher at any time in the middle of the run, it is merely necessary to press the "Stop" button. The drive motors slowly reduce speed until they reach creep speed, and then they cut off entirely. To start up again, either the "Slow" or the "Fast" button may be pushed.

Maintenance. None of the slashers of this design now in operation in mills has given much trouble. The use of this drive eliminates the necessity for a friction clutch, and this simplification eases the maintenance man's job.

The drive motors are handled in

Multi-motor drive on Uxbridge "gentle air" slasher.

Westinghouse Electric Corp.

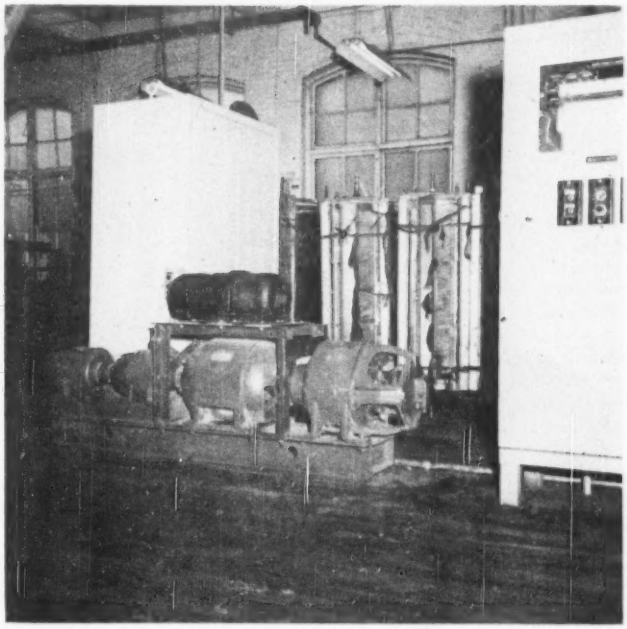


the same manner as other motors in the mill so far as lubrication and cleaning are concerned. Normally, the maintenance crew just adds these motors to their regular lubrication schedule and visits them at regular intervals. A good grade of SAE 40 oil is recommended for these motor bearings and for the attached speed reducers.

The adjustable speed electric motor is a simple and reliable device which seldom needs much repair work. If any considerable amount of repair is required, most mills send them to electric shops. However, every mill maintenance man should know how to replace commutator brushes and keep commutators in good condition. Excessive sparking is usually an indication that the commutator or the brushes require repair, and worn brushes should be replaced and the commutator bars cleaned. If the commutator has worn out of round, it should be placed in a lathe and turned down and polished and the mica slightly undercut.

Very little trouble has been had with the generators or the rotating control. These, too, are simple devices requiring little more than occasional lubrication of the bearings. Commutators on the generators should be checked and maintained just as are commutators on d-c motors. Again, excessive sparking may be an indication that brush contacts are bad.

Motor - generators should be checked from time to time to see that they are not vibrating excessively. The shafts are rather long for the bearings provided, and at least one mill has had a little trouble with the shaft getting out of line on one set. Also, it should be recognized that motor-generator sets are usually supplied by the manufacturers with "non-self-supporting" bases. These sets should be supported on rigid, non-flexing bases such as concrete or its equivalent. Too often a mill will take a motor-generator set and bolt it to a wooden floor which is not level and which is subjected to considerable flexing. Naturally, under such conditions units on the sets can get out of alignment and result in serious trouble.

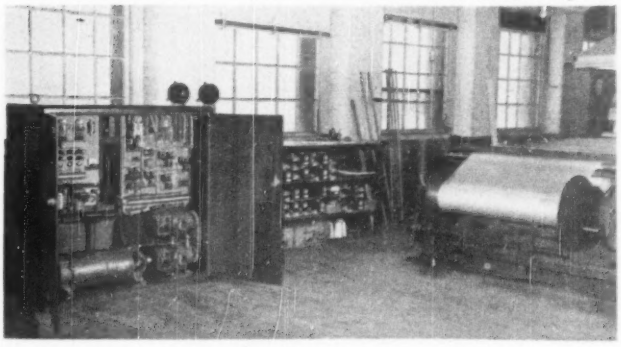


General Electric

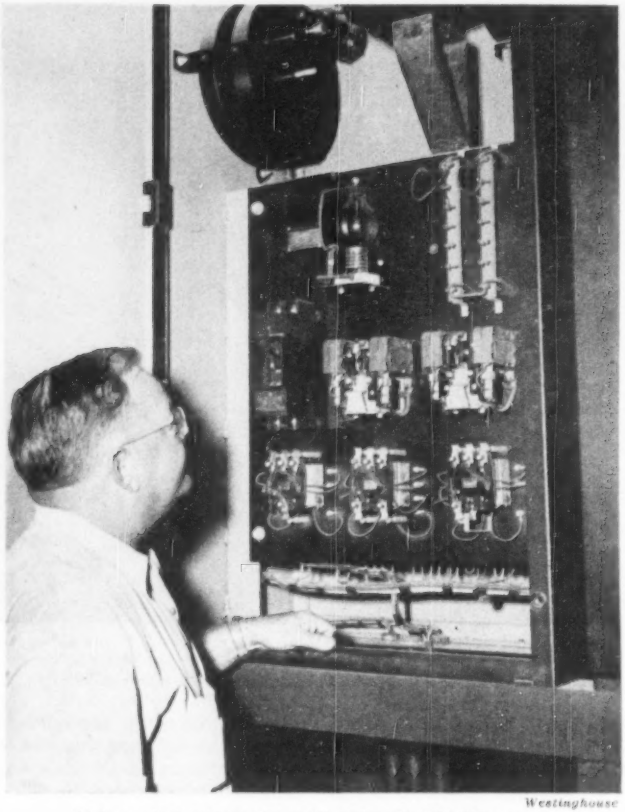
Motor-generator and rotating control for multi-motor drive.

Control unit for multi-motor drive. This unit combines rotating and electronic control to drive slasher shown at right.

Reliance Elec. & Engr. Co.



The control panel contains little that can go bad except the rectifier tube, where one is used, and the motor operated rheostat. It is wise to keep at least one extra rectifier tube on hand as a replacement. These are nothing more than vacuum tubes, similar in operation to those in a radio, and they will burn out in time. In this particular service, the tubes have an average life of from six months to a year. Some maintenance men make it a practice to replace all tubes when they are a year old. Tubes can be replaced during off



Westinghouse

Main control cabinet for multi-motor electric drive.

hours and thereby avoid a shutdown, which is inevitable if the tubes are used until they burn out.

Now, most manufacturers use metallic rectifiers instead of a tube, and these have a long life, thereby eliminating much rectifier maintenance.

Moving parts of the motor driven rheostat are located in the main control panel, and they also need replacing from time to time. It is recommended that spare parts (all of which are easy to install) be kept on hand.

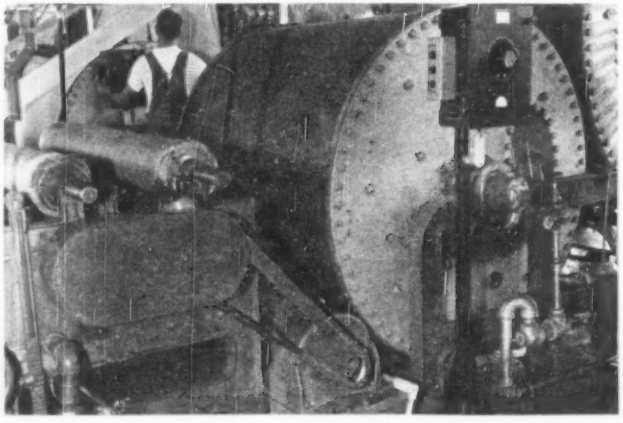
The moving arm on this rheostat is made of copper, and it turns against a copper ring. This rubbing will generate, over a period of time, a little copper dust which falls downward onto the bars of the rheostat directly below. This copper dust, if enough of it collects, shorts the rheostat bars and causes the slasher to accelerate in jumps rather than in gradual steps. This trouble can easily be avoided by blowing out the rheostat with low pressure air every two weeks.

Some calls for the maintenance crew come on the failure of the slasher to start as a result of lint clogging one of the switches. Since there are usually a dozen push button stations on every slasher, it is sometimes a long job to find the particular switch which is clogged. As much as mills hate to spend money for lint-proof switches (they cost about twice as much as standard switches), it is probably a good investment in a cotton slashing room. For rayon or nylon, there is little lint, and standard switches are satisfactory. This problem is encountered not only with multi-motor drives but with any drive using pushbutton stations.

Maintenance men in mills using these electric drives complain that the manufacturers do not furnish enough instruction data to permit them to easily understand the design and construction of the electrical layout. Too often, they have to call in manufacturer's maintenance men for small jobs which they could have handled with no outside help had they only had a good maintenance manual.

Motor driving size box roll as part of multi-motor drive.

Westinghouse



2 Mechanical Variable Speed Drives

Design and Construction. The mechanical type variable speed drives have been used on slashers for many years and they have proved very satisfactory. The addition of new automatic controls now makes them more adaptable than ever, and even with these new controls, the cost of the complete slasher installation is considerably less than the all electric drive.

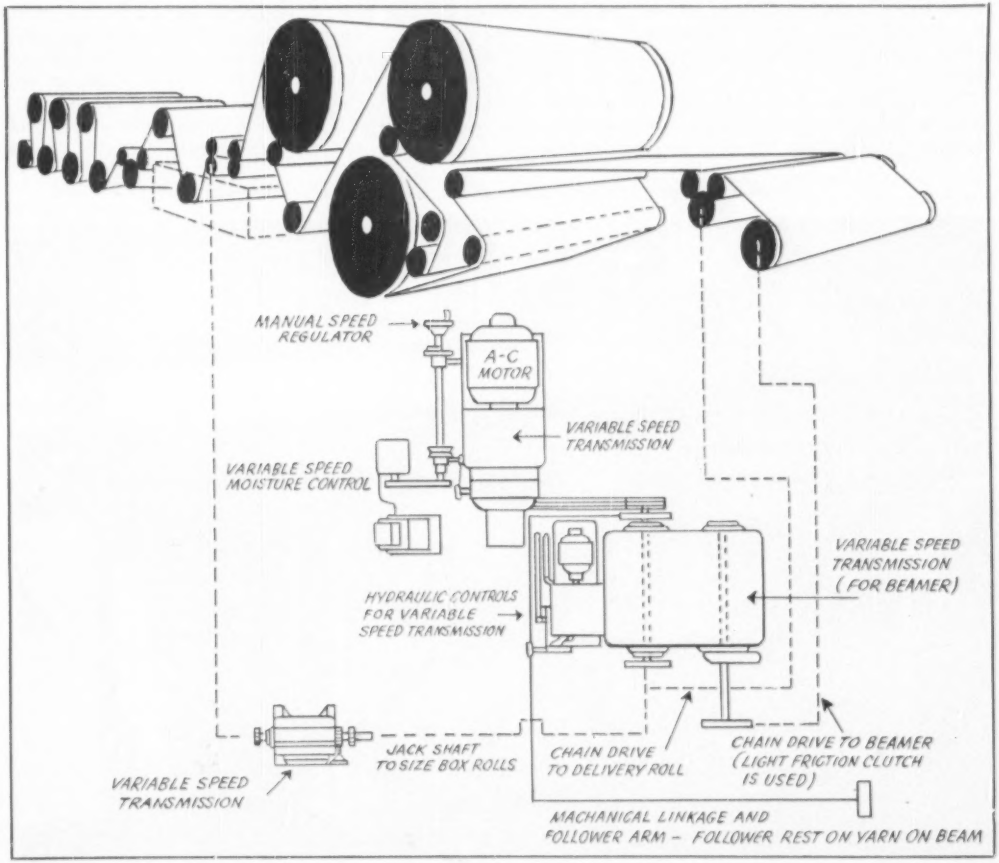
With this type of drive, the slasher is driven by one large a-c motor, and speed variations are achieved through the use of two variable speed transmissions, one to vary the speed of the whole slasher, and one to vary the speed of the beamer as it builds up the yarn. Theoretically, the variable speed mechanism could be any of several types; it could, for example, be a variable speed fluid drive. In actual practice, most of these variable speed transmissions are of the variable diameter pulley type as built by Reeves Pulley Company.

The latest Reeves slasher main drive consists of the Motodrive, in which the driving a-c motor and variable speed mechanism are combined to form one integral unit. This unit, in turn, drives a transmission which transmits variable speeds to the beamer.

This mechanical type variable speed transmission consists of two shafts, the input, or constant speed shaft; and the output, or variable speed shaft. A pair of conical faced discs are fitted to each shaft, and they are connected through a V-belt. The discs form a "V" on each shaft, and the V-belt delivers power from the constant speed, input shaft to the variable speed, output shaft. This V-belt operates under constant, pre-set tension throughout the speed range of the unit.

The ratio between the driven pulley and the drive pulley is varied by mechanically shifting the discs of one pulley apart while the

Schematic diagram of typical mechanical variable speed drive.


MANUAL SPEED REGULATOR
A-C MOTOR
VARIABLE SPEED TRANSMISSION
VARIABLE SPEED MOISTURE CONTROL
HYDRAULIC CONTROLS FOR VARIABLE SPEED TRANSMISSION
VARIABLE SPEED TRANSMISSION (FOR BEAMER)
JACK SHAFT TO SIZE BOX ROLLS
CHAIN DRIVE TO DELIVERY ROLL
CHAIN DRIVE TO BEAMER (LIGHT FRICTION CLUTCH IS USED)
VARIABLE SPEED TRANSMISSION
MACHANICAL LINKAGE AND FOLLOWER ARM – FOLLOWER REST ON YARN ON BEAM

discs of the other are brought together, thus changing the pulley diameters.

As applied to a slasher, the large a-c motor drives through one of these variable speed transmissions. This transmission, in turn, drives another transmission of similar design. Power for the drive of the delivery roll and the size box roll is taken from the shaft of the driving pulley of this second transmission, while power from the variable speed shaft is used to drive the beam. This arrangement gives a second speed variation to the beam drive over and above the speed variations of the slasher as a whole.

The variation in speed in the main drive is accomplished by a small pilot motor which, through hydraulic controls, moves the cones of the variable pitch pulleys to get the desired speed ratio. Newer drives also use a two-speed drive motor.

The variable speed to drive the beam on the slasher is not intended to replace the friction, but it uses a light, modified friction to help provide a constant tension on the yarn between the delivery roll and the beam. This is accomplished by driving the beam with a variable speed drive having a speed range equal to or greater than the variable diameters of the beam as it builds up in diameter (6″ barrel to 36″ beam). This drive is usually set up to drive the loom beam, through the friction, with from 5% to 15% slip in the friction, depending upon density of beam required, and this percentage of slip is held constant throughout the build up of the beam. The speed change is accomplished by using a follower roll riding the beam, or by using the present presser roll, the travel being transferred to the control arm on the drive.

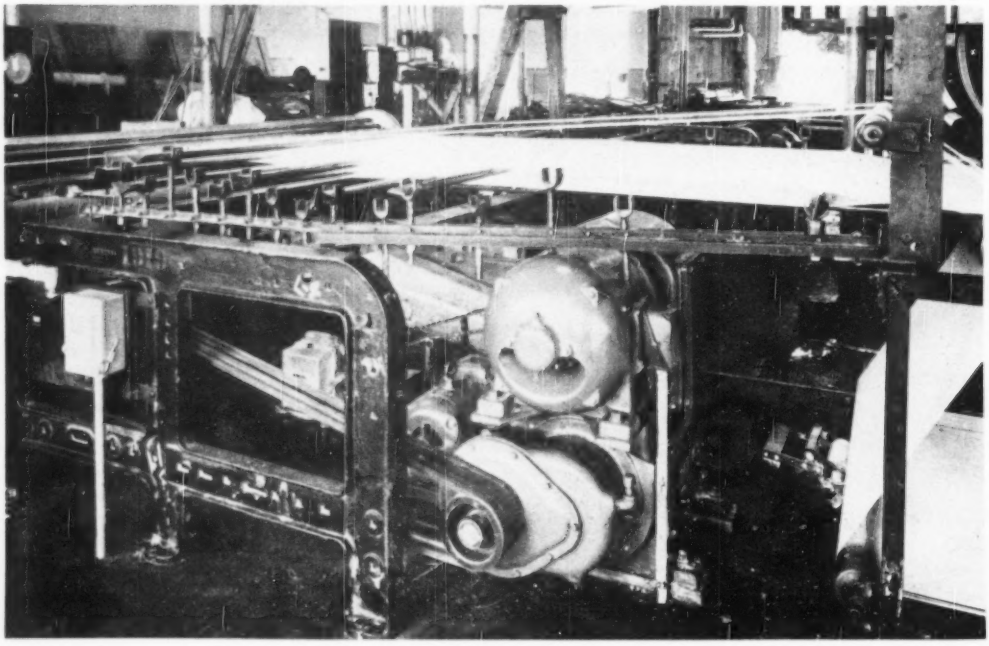
To maintain a constant stretch of the yarn between the size box roll and the delivery roll, the shaft driving from the delivery roll up to the size box roll is cut, and another small, vertical, variable speed transmission is inserted. This permits an adjustment of speed between the two rolls so that proper stretch may be maintained. Although very little speed change is necessary, very close adjustment is essential, and these drives are furnished with Micro-Controls to effect minute adjustments.

On later model slashers, these drives are located under the slasher with the speed adjusting wheel brought out to the side of the slasher. This side shaft is cut and the vertical type drive is installed to receive power from the shaft section driven by the front roll (constant speed) and deliver power to the shaft section driving the size box rolls (variable speed). Here again the speed of this drive is always in direct proportion to the speed of the slasher.

Operation: This mechanical drive is generally operated by pushbutton stations in much the same manner as the electrical multimotor drive. To achieve a smooth acceleration from creep to full speed, a 2-speed drive motor is used and the mechanical variable speed

Slasher equipped with mechanical variable speed drive as main drive.

Reeves Pulley Co.



drive is equipped with an automatic pneumatic control which is actuated by the operator through the push button stations. The wiring of this system is such that the slasher is always started at creep speed.

At creep speed the motor is running slowly, and the variable speed drive is running at its minimum speed setting. When the operator pushes the "Run" button, the motor goes into high speed and the automatic pneumatic control takes over and slowly shifts the variable speed drive to its pre-set production speed. When the operator wants to go back to creep speed from running speed, he pushes the "Creep" button, the control shifts the drive to its minimum speed setting; and when this minimum speed setting is reached, the motor automatically goes into slow speed, thereby giving the same creep speed had previously.

There is always an ample air supply in the slasher room, and since this automatic pneumatic control operates on 40 lb or less pressure, the control is no problem. A control valve is furnished with the control so that each installation can be adjusted as to the number of seconds required for acceleration and deceleration of the slasher.

On most of the push-button control arrangements used on this drive, it is important to go from "Fast" to "Slow" before cutting the slasher off. Stopping in this order gives the control motors a chance to bring the cones to the proper low position before the slasher comes to a stop. If this were not done, the speed change on starting up would be too rapid, and ends might be broken, the pulleys being started in nearly full speed position.

It is possible, however, to install controls so arranged that the slasher can be started only when the pulley discs in the transmission are in their slow speed position. Such an arrangement is advisable, for then the slasher cannot be started at a fast speed.

Special features are provided for returning the mechanical drive of the beam to high speed when doffing, so that it will pick up the yarn on the new barrel. Usually a separate push button station is provided with a "Doffing" button which is pressed just before the doff, thereby returning the drive to high speed position. This tends to give more tension on the beam for the last few laps of yarn on a full beam, but the friction clutch takes care of this without undue strain on the yarn. Then, when the empty beam is put in place, it runs at the higher speed which its smaller diameter requires.

Stretch between the size box rolls and the delivery rolls is regulated by a handwheel located on the small vertical transmission built into the drive shaft connecting the two rolls. Once this is set for any particular count of yarn, it is seldom necessary to change it unless some other factor markedly influences the stretch in this region of the slasher.

The moisture control, if it is of the speed regulating type, is connected to the pilot motor driving the hydraulic controls of the main variable speed transmission. Any change in the moisture content of the yarn at the beam will cause this motor to actuate the hydraulic controls and thereby vary the speed of the whole slasher.

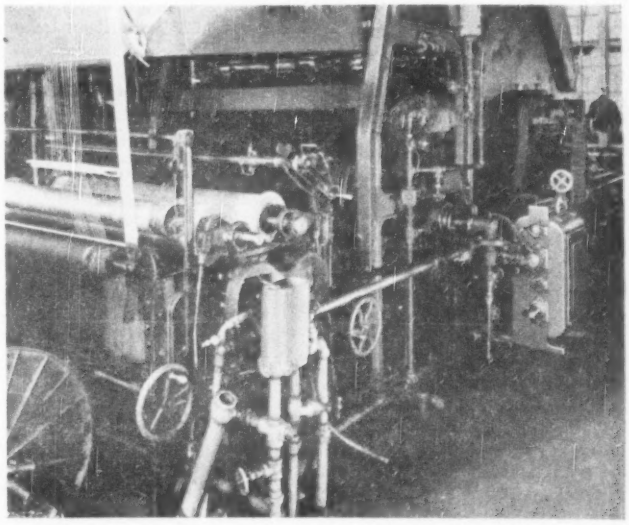
If the moisture control operates on the pressure regulating valves of the dry cans, the speed of the slasher remains constant unless changed by the operators.

Maintenance. Although it is not uncommon to find master mechanics in cotton mills complaining that maintenance of the electric drives, while usually simple, sometimes requires more knowledge of electrical equipment than they have at hand, maintenance of the purely mechanical variable speed drives is right in their field. On the other hand, it is mechanically more complicated than the electric drive, and it requires considerably more mechanical maintenance.

It is important that this drive be kept well lubricated, while at the same time, the use of excessive amounts of oil or grease is to be avoided so that there will be no danger of its being thrown on the yarn or smeared on the drive belts. A number of chain drives are also included in this set-up, and the chains must be kept well

Stretch is controlled by small, vertical transmission at right.

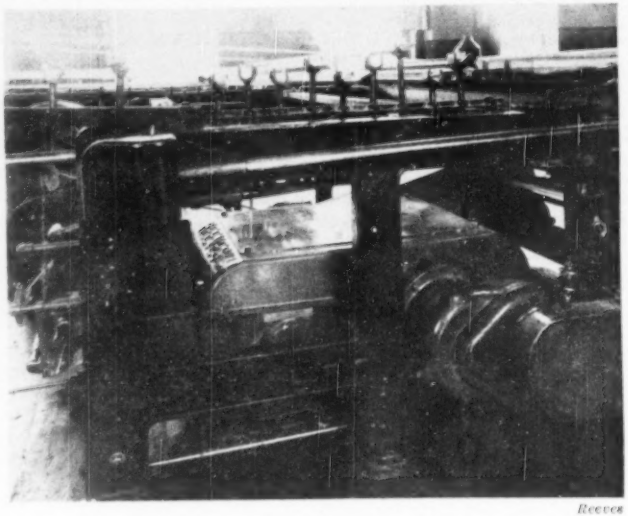
Reeves



lubricated and properly maintained.

These drives are well built, but with so many moving parts, there is bound to be wear. The belts used on the variable diameter pulleys must be replaced from time to time, old belts having a tendency to slip. Chains must have bad links replaced, and sprockets also need occasional replacement.

One master mechanic stated that he had always had good service from these drives when they were slightly oversize for the job. It was his feeling that most trouble occurred when the job was too heavy for the transmission, and he felt that most mills would do better to put in oversize transmissions instead of trying to get the smallest size possible.



Reeves

Hydraulically controlled, mechanical beam drive.

It is also true that to give good service these drives should be run up and down through their speed range occasionally so that the discs will move in and out on their shafts and permit lubricant to get to the whole shaft. On the two transmissions used for the main and the beam drives, this is not much of a problem, for in operating the slasher they run themselves up and down a number of times each day. On the other hand, the small transmission located on the jack shaft between the size box rolls and the delivery roll seldom has its settings changed. This makes lubrication of the pulley shafts difficult, and the operators should be instructed to run this transmission from high to low and then back to proper stretch position every two or three days.

Maintenance men claim that such action will cut down shaft wear considerably. Because of the very slight adjustment required on these transmissions, it has been found that smooth faced discs give better service in most mills.

Electrical maintenance on these drives consists of no more than the proper oiling and cleaning of the main a-c drive motor and the small pilot motors actuating the hydraulic controls. The motors should be handled in the same manner as all other a-c motors throughout the mill. There are also push button switches. Here, again, the lint-proof switches will prove money savers if there is much lint in the air.

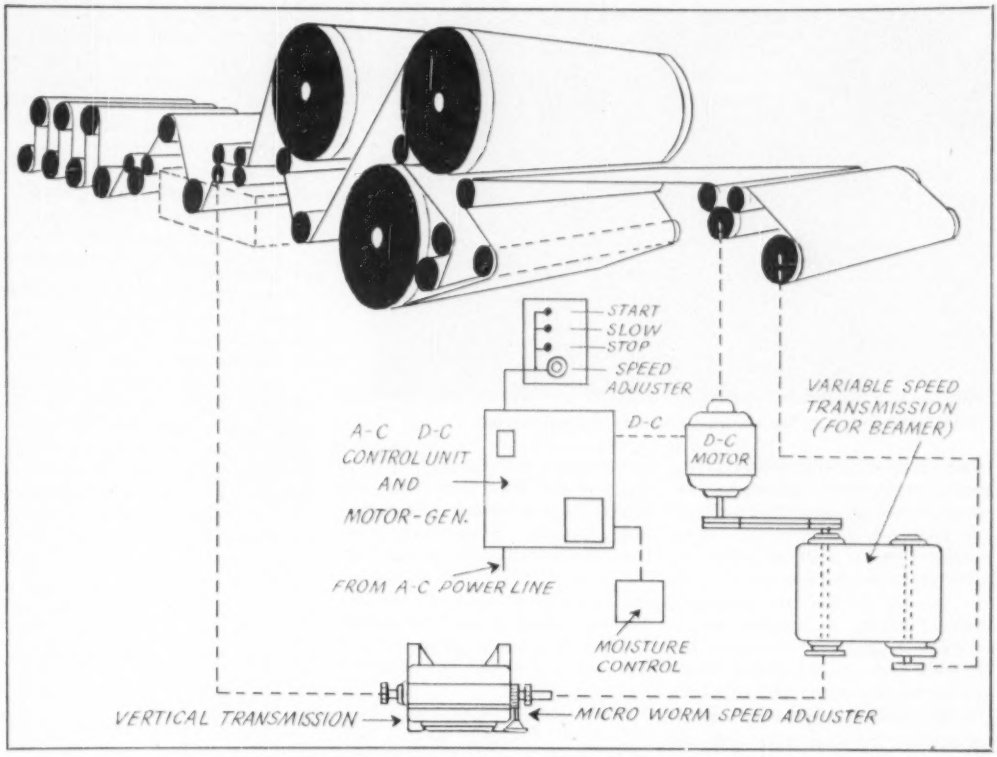
It should be noted here that the simplified friction clutch as used on these drives gives almost no trouble. It runs just tight enough to maintain proper tension, the variation in beam speed between empty and full being handled by a variable speed transmission. These clutches can go for years without giving trouble of any kind.

3 Electro-Mechanical Drives

Design and Construction. The electro-mechanical drive is a happy compromise between the electrical drive and the mechanical drive. It sacrifices some of the mechanical simplicity of the electrical, yet gains by avoiding the complicated electrical arrangement required by the electrical drive to maintain constant beaming tension. On the other hand, it gets rid of some of the bulk and mechanical complications of the all-mechanical drive. Like all compromises, it loses some advantages to gain others. It is a very satisfactory drive, and it is being used with excellent results in a number of mills for both cotton and synthetic slashing.

This drive uses a direct current, adjustable speed motor to drive directly the delivery roll and the size box rolls. This may be one motor driving the delivery roll while the size box rolls are driven through a jack shaft and a variable speed transmission; or it may be two separate motors, with an ammeter and rheostat on one, just as on the all electric drive. In either event, a motor generator is used to provide d-c current for the drive motor or motors.

Different manufacturers use different systems to vary the speed



Schematic diagram of typical electro-mechanical slasher drive.

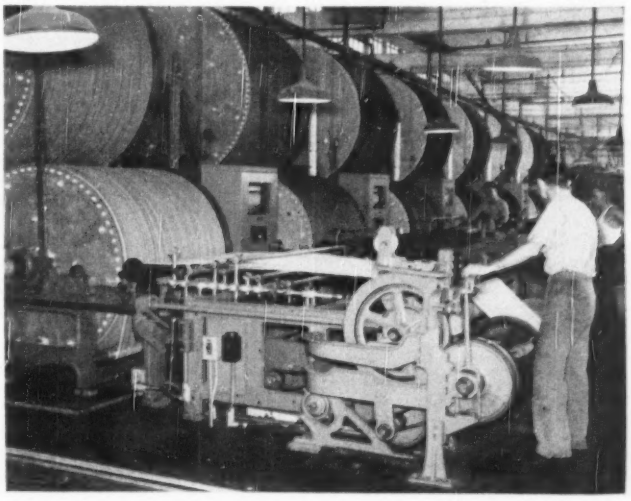
of the drive motor. Until recently, most manufacturers of this drive used a motor operated rheostat to get proper acceleration from low to full speed and back down again. This was similar to the method used on the multi-motor electric drives. Now, newer methods are being used.

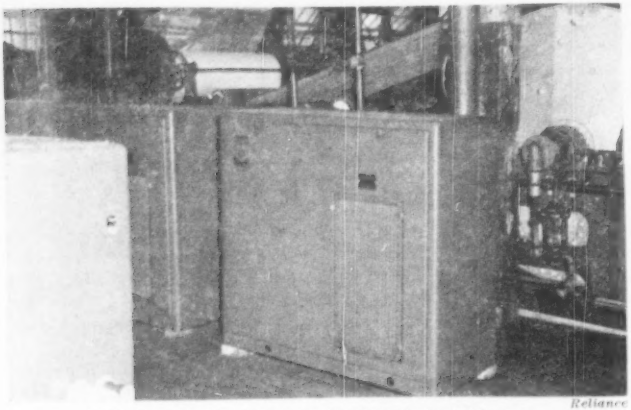
Reliance Electric and Engineering Company has a new control circuit, "VSC," which eliminates the exciter on the generator and substitutes electronic tubes. The voltage across the generator field is varied electronically, and no moving parts are used.

The electro-mechanical drive does not vary beam speed independently of the speed of the slasher. Instead of using an Amplidyne, VSR, or Rototrol to regulate the power to a beamer motor and thereby maintain proper

Modern electro-mechanical drive installation.

Reliance





Reliance

Control units for electro-mechanical slasher drives.

beam speed and tension, this drive uses a mechanical variable speed transmission to vary the speed of the beam as it builds up. This variable speed beamer drive is identical to the beamer drive used on the all mechanical arrangement. It uses a follower on a lever to regulate the position of the cone discs in the transmission and hence, the speed of the beam.

With this arrangement, speed control for the slasher as a whole is had through the use of a variable speed, direct current motor and its control circuit, while the further variation required for the build-up on the beam is had through a mechanical transmission.

Operation. The operation of this electro-mechanical slasher drive is similar to the operation of the all electric drive except that the simplified friction clutch is used to hold proper tension. This does not actually require the operator to do anything differently except that he must remember to run the transmission discs back to high speed position just before doffing.

Maintenance. Here, again, maintenance becomes a compromise between the electrical maintenance of the all electric drive and the mechanical maintenance of the all mechanical drive. However, it should be noted that the most complicated electrical portion of the electric drive has been replaced by a mechanical transmission, thereby eliminating most electrical maintenance of the type that only an electrician could handle. On the other hand, the use of only one, or at most two transmissions instead of three reduces mechanical maintenance proportionately.

On the new Reliance drive, there is no longer any maintenance connected with brushes or commutators on the exciter on the generator. Also, the elimination of the motor operated rheostat reduces maintenance and repair work. The electronic control, however, contains eight control tubes and four power tubes, and replacements should be kept on hand. Power tubes have an average life of about 1000 hours, while control tubes last about three times that long.

Since all other maintenance required on this drive has already been covered in the discussion of electrical and mechanical drives, none of it need be repeated here.

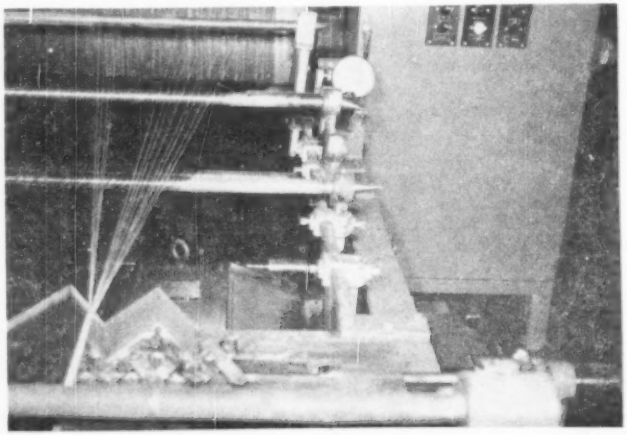
Costs. The first cost of the electro-mechanical drive falls in between the cost of the higher priced all electric drive and the lower priced all mechanical. Cost of maintenance is normally in reverse order. However, in no instance have maintenance costs been excessive in any of the mills visited. In fact, in comparison with the older, cone type drive, maintenance costs are low.

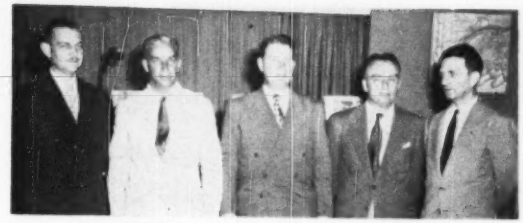
Because of the low maintenance costs and particularly because of the uniform yarn tension, the uniform beam density, and the higher running speeds, all of these drives have been able to pay for themselves in one to two years.

Certainly part of the credit for good yarn quality should go to the moisture controllers which are universally used with all of these newer drives. The controllers work well with any of the three types.

Variable speed drive motor is located under slasher near dry cans.

Reliance





Officers of Alabama Association

(Left to right in photo)

Ch. of Board: Paul A. Redmond, Jr., Alabama Mills

President: Thos. D. Russell, Russell Mfg. Co.

Vice-Pres.: D. Hamp Morris, 3rd, Geneva Cotton Mills

Treas.: Joe L. Jennings, West Point Mfg. Co.

Exec. V-P.: Dwight M. Wilhelm, Montgomery, Ala.

Alabama Cotton Manufacturers Meet

Association Sponsored Contests Promote Cotton

Staff Report

THE ALABAMA Cotton Manufacturers Association, in session for the 12th annual meeting at Biloxi, Miss., was told by Paul A. Redmond, Jr., of Alabama Mills and outgoing president of the association, that the state-wide Maid of Cotton Contest has created so much enthusiasm within the state that nine cotton interest groups will sponsor and participate in it next year. The contest is part of a broad program to engender the interest of the public in cotton and cotton products.

Another segment of promotional work sponsored by the association is the Cotton Improvement Contest; expediting of this program is performed by the extension service at the Alabama Polytechnic Institute, Auburn, Ala. A report on the Cotton Improvement Contest was given by Craig Smith of Avondale Mills, who pointed out that the contest shows the interest of the textile mills in the welfare of the cotton farmer. "Benefits are cumulative," according to Mr. Smith.

In Mr. Redmond's report to the association, he cited examples to illustrate how the state association assists the mills by giving informative data to the state legislature, often offsetting impending unfavorable legislation.

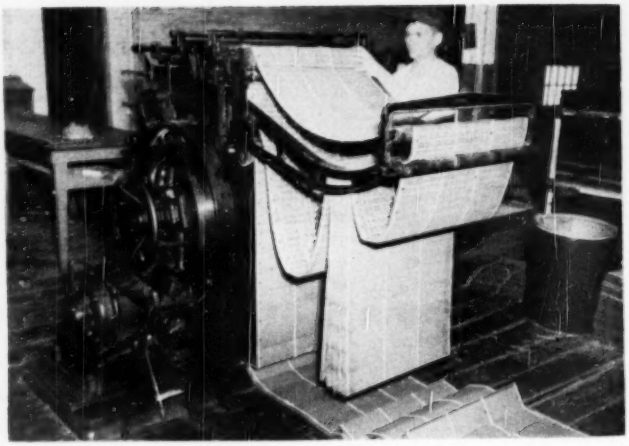
Turning to the importance of the suppliers to the industry, Mr. Redmond said that during all of the association's conventions "our supplier friends have been so much a part of our meetings that our plans include them in the same manner as our mill officials are included."

A brief but informative description of the functions of the New York Cotton Exchange was given by Allison H. Pell of Charlotte, N. C., who advised that price insurance is the primary work of the exchange.

One function, as offered by Mr. Pell, is to provide daily price or value information to the farmer, the merchant, the manufacturer, the converter, and the retail dealer. Enlarging on this point, he cited history to indicate that during the first war, when the cotton exchanges were closed for a short time, only the larger merchants had much idea of the true market value of cotton.

Left, Alabama men applaud the speaker; right, opening session was informal (hot dogs and square dancing)

A power driven Jacquard card repeater, under the supervision of a competent technician, can be used in many ways to effect savings in a Jacquard weaving mill.



EXCLUSIVE

By OSBERT HUGHES

The Jacquard Card Repeater

An outline of some of the ways in which a card repeater may be used to reduce designing and card-cutting costs in Jacquard plants.

MANY JACQUARD MILLS have been satisfied to maintain perhaps one Jacquard card-cutter and a piano card-cutting machine. This would take care of their immediate needs for small sets of cards, rush jobs, and the repair or replacement of cards broken or damaged either in storage, handling, or production. It was quite customary to have their designing work, the bulk of their card-cutting, and all their card repeating done by one or more of the independent firms specializing in this type of business.

In recent years, however, the trend has been toward organizing mills on a more nearly self-contained basis. With this in mind, designing departments have been established, and sufficient card-cutting, card-lacing, and card-repeating machinery installed to handle all of a mill's own work. This does not prevent a mill from making use of a public card-cutter's facilities when an emergency may arise, or when help is needed to solve a difficult technical problem. It does, however, usually work out to a mill's advantage in many different ways. Card repeating can be better scheduled to meet production requirements, or to meet a sample dead-line. Additional looms can be rushed into production on a good-selling item with very little down-time on the loom running the original set of cards while these cards are taken off for repeating purposes. Often this is quite important, in that a sample of this style will be urgently needed at the same time the cards are diverted to the card-repeating machine. When it is decided to increase the number of looms running on one style, the mill's card repeater can usually have the additional sets of cards ready in much less time than is required to prepare the warps and filling and have the looms set up.

Potential Uses. The primary purpose of the card-repeating machine is to make duplicate sets of cards, utilizing the original set cut by hand on the piano machine as a master copy. However the machine's potential usefulness extends far beyond this, often being limited only by the designer's technical understanding and study of the given problem. Close collaboration between the designer and the card cutter will develop many ways in which the repeater can be used to simplify designing and card-cutting, increase the department's production and lower the cost of the cards and designs.

Jacquard designing is both an art and a science. The art lies in making an acceptable and original sketch for the pattern to be made, in transfering this sketch to the proper design paper, and in the selection of the most appropriate weaves to develop the pattern to the best advantage in

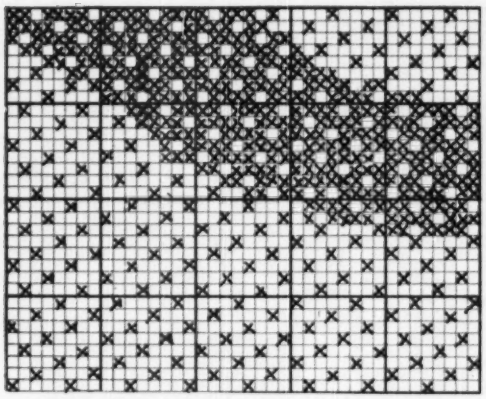


Fig. 1. Small portion of a damask pattern using a 5-harness satin weave both for warp and filling. Note that the filling satin runs in the opposite direction to that of the warp satin.

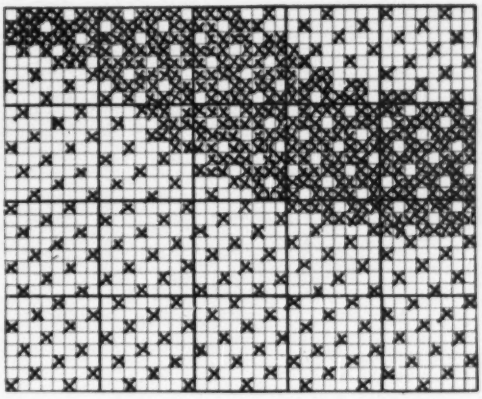


Fig. 2. Damask pattern using a 5-harness satin weave same as shown in Fig. 1, except that here the warp and filling satins run in the same direction.

the fabric. The science in designing lies in the mathematical precision and skill in which these weaves are applied and developed in the various portions of the design, and in condensing the intricate designs to simplify both the design and the card-cutting. No machine can take the place of the skilled designer's hand when the weaves have to be transposed and fitted together for best results in the finished appearance of the fabric. On the other hand, when certain weaves are mechanically employed throughout the fabric, a card repeater can often be used to better advantage and with less opportunity for errors than a painted design of these weaves which must be cut by the card cutter.

The card repeater is useful in making cards for the second machine, when a small pattern is put on this loom. It is always a good policy, when tying up a double-machine Jacquard, to have both machines tied alike if at all practicable. Thus, when a smaller pattern is desired, the designing and card-cutting expense can be reduced by merely repeating the cards for the second machine from those designed and cut for the first machine. This keeps the loom set-up flexible as the double-machine tie-up can always be available when large patterns utilizing the full width of the repeat are to be made.

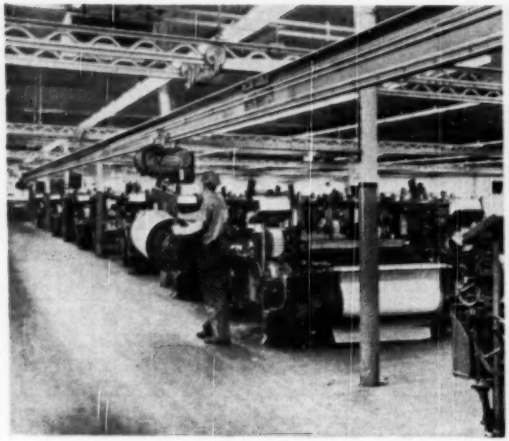
Some mills, using both single and double machine Jacquards, simplify their card requirements by using the same tie on both types of Jacquards. The double machine has a repeat twice as wide as that of the single machine. In this instance, both types of Jacquards can be used for the small patterns if production requirements so demand. An unlimited number of duplicate sets can be repeated from the original set of cards, and this layout of loom ties represents a most advantageous and economical set-up.

It often happens that small patterns prove to be popular sellers. These patterns may require only a very few cards for the length of repeat. It will prove advantageous to repeat the pattern a number of times and then lace the cards together to form one longer set. This will prevent the cards from rapidly wearing out due to passing over the Jacquard cylinder too frequently, or becoming broken and damaged for the same reason. Also the larger set can be more readily indexed, stored, and located in the card storage rack.

Point Tie Patterns. Some fabrics are woven with a border and a center panel composed of several repeats of a small all-over pattern. Other patterns may consist of a large center motif with a border composed of a number of smaller repeats. Among the fabrics found in this category are certain types of rugs, bath mats, table cloths, napkins, bedspreads, blankets, and dresser scarves. Frequently these patterns are woven on a point tie. The card repeater can be used to very great advantage in this class of work. The card cutter should first cut only the portion of the design not intended to be repeated, leaving the balance of the card blank. He should then cut, on a separate set of cards, one repeat only of the small repeat section, whether this be in the border or the center panel. Then, by using this small repeat set as the master copy, the small repeats can be repeated on the cards on which the large repeat has already been cut.

The complete cards containing both one repeat of the small repeats section and a complete repeat of the large section may be cut first. The smaller repeats may be repeated on the balance of the cards by covering up or "blocking-off," with a section of a blank card, the holes in the cylinder of the repeater controlling the unwanted portion of the master cards. This will allow the repeater to transfer only the small repeats section to the balance of the cards.

Close supervision is required for this operation in that great care must be exercised in covering-up the correct section and also in synchronizing the proper card numbers together. Otherwise



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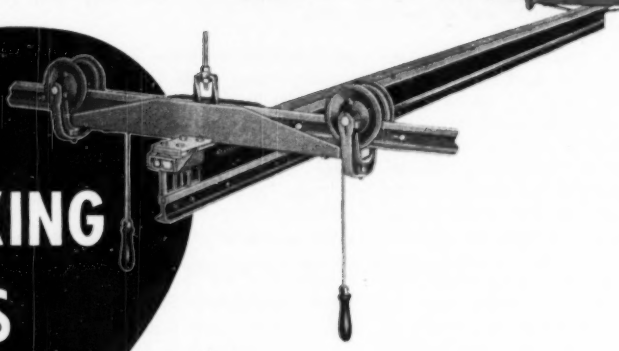

American MonoRail easy moving cranes interlock at cross-over points to permit passage of carrier with beam across the locked bridges. Operator can release any crane for transfer of beams over the long, compact rows of looms.

This is one of hundreds of handling systems designed by American MonoRail engineers. Many are more complicated, many much simpler, but all perform the most efficient handling operations at considerable savings.

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the set of cards may be ruined. Variations of this "blocking-off" technique can often be used to good advantage in combining one border with different centers or vice versa. It can also be used for developing patterns using a hotel, club, or other institutional name or monogram combined with a standard border or background effect. All of these various means of reducing the amount of original designing and card-cutting, and letting the card repeater do the bulk of the work, will result in a much lower cost for the completed set of cards.

Certain types of Jacquard figured stripe designs lend themselves very readily to this "blocking-off" technique. Some portions of the pattern will repeat on just a few cards, and the remainder of the pattern will run the entire length of the cards. By blocking-off the long-repeat portion of the cards, the small repeats can be repeated in their proper section, thereby saving a considerable amount of designing and card-cutting. Upholstery, drapery, mattress ticking, and bedspreads are among the types of fabrics to which this method often can be applied.

Short Cut. The foregoing paragraphs enumerate some of the more general purposes to which a card repeater can be put. In addition, design costs can be reduced and card-cutting simplified by using the repeater to introduce certain weaves, rather than by painting these weaves on the design and cutting the cards on the piano machine. The designer should determine when this can and should be done.

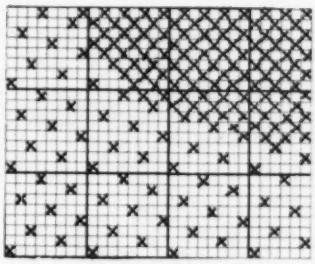


Fig. 3. An 8-harness satin weave can be combined satisfactorily with a plain weave to produce some pleasing effects.

Fig. 1 shows a small portion of a damask pattern using a 5-harness satin weave both for warp and filling. It will be noted that the filling satin runs in the opposite direction to that of the warp satin. The designer has varied and transposed the satin around the edge of the figure. His purpose in so doing was to lock the filling in place so that it will not slide under the warp threads, causing a ragged-appearing edge. On low sley and low pick fabrics this "locking" of the two satin weaves together will give a much clearer and regular outline to the figure. No weave repeating can be done when this method of designing is employed in that all of the transposed weaves must be painted in by the designer and cut as indicated.

On certain types of satin damask fabrics the filling weave can be inserted by the card repeater, thus effecting a considerable saving in time and cost of designing and card-cutting. This could apply to finer constructions of table damask, and to drapery and upholstery fabrics using a novelty yarn as filling. Fig. 2 shows the same figured portion of a design as Fig. 1, except that in Fig. 2 both the warp and filling satins run in the same direction. It is not possible to repeat in a 5-harness filling satin that runs in the opposite direction to that of the 5-harness warp design already cut by the card-cutter. In some fabrics and with certain yarn combinations, this is not always necessary or important.

A painstaking designer will determine in which direction he wants to run the satin warp weave for the fabric. Definite rules governing this are based on the twist of the warp yarn and whether a flat satin or a definite twill line is desired in the finished fabric. Experimenting on warps and looms is the best way to determine the type of warp satin desired.

On a point tie the satin weave would automatically reverse at the point, and the direction of the satin weave used would be immaterial. An exception would be on very fine quality fabrics. If the mill considers the trouble worthwhile, the twist of the warp yarn can be reversed at the point to give a uniform appearance to the warp satin across the whole width of the goods.

The method of producing the

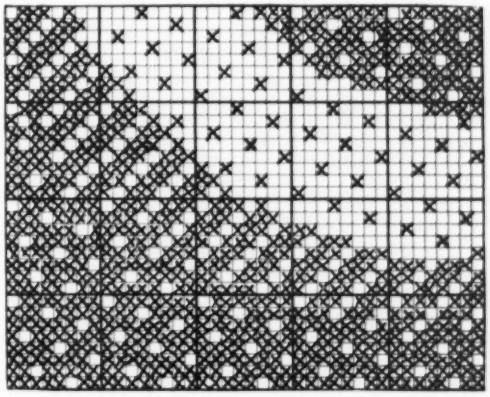
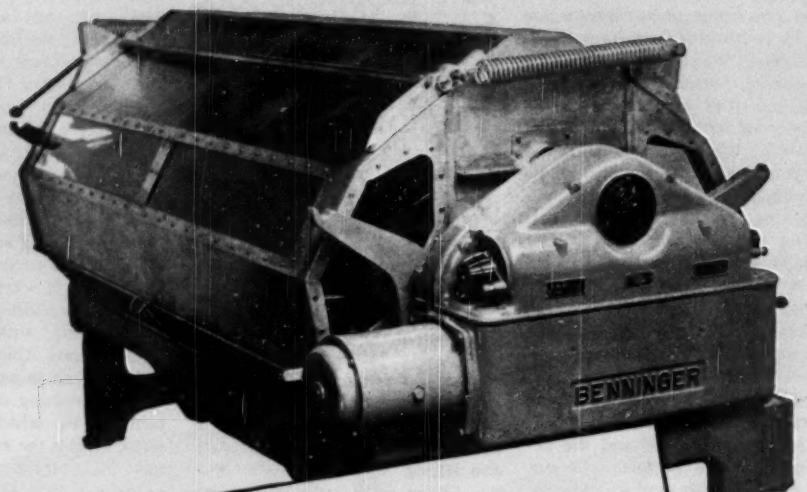


Fig. 4. Portion of a damask design having an 8-harness satin warp ground effect, a 3 x 1 twill for shading, and an 8-harness satin weave for the filling effect. Only the warp satin and the 3 x 1 twill need be cut by the card-cutter. The filling satin can be inserted by the card repeater.



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effects shown in Fig. 2, by combining the use of the card repeater with the piano card-cutting machine, is as follows: The filling effects of the design should be painted in a solid color, having no weaves indicated. The warp satin should be painted in the usual manner, with no breaks or transpositions around the edge of the figure. Care must be exercised in having the warp satin run continuously and unbroken through the whole design, or the repeater may ruin the warp satin in those portions where the breaks occur. The card cutter will then cut in the ground warp satin effects only, leaving the entire filling effect blank on the cards. The cards are then laced together.

A small master set, containing a repeat of the 5-harness satin filling weave only, should be prepared. By running this master set on the repeater, in conjunction with the cards on which the warp satin has already been cut, the repeater will insert the 5-harness filling weave on the cards and they will be complete and ready for the loom. The two weaves to be used together must be carefully prepared, so that the repeated weave will not "cancel-out" the warp satin. Care in synchronizing the cards on the repeater is necessary to prevent ruining the cut set. Care in using the repeater in this manner will produce a finished set of cards in much less time and at considerably lower cost than if the whole job was done on the card-cutting machine. An added feature is that the cards will be entirely free from card-cutting errors in the filling satin portion of the design.

Combining Weaves. The principle of combining weaves by using the card repeater can be used for many different fabrics. A study of the basic weaves used will readily develop a list of those weaves that can be used together. Generally speaking, the filling effect will be the weave repeated in, because this weave will have less risers than the warp weave. Exceptions would include fabrics woven face down on the loom, in which event the warp effect would have the least number of risers. Another exception would be in some intricate multiple-warp-and-filling fabrics, wherein possibly one warp serves as a binder warp and works positively with the same weave all through the fabric.

Plain weave and 5-harness satin cannot be combined together by the repeater. Neither can a 5- and an 8-harness satin. The risers of one of these weaves would nullify the sinkers of the other, thus destroying the weave effect. Plain weave and 8-harness satin will combine together perfectly, as illustrated in Fig. 3. Also a 1x3 twill will combine with an 8-harness satin. Fig. 4 shows a portion of a damask design having an 8-harness satin warp ground effect, a 3x1 twill for shading, and an 8-harness satin weave for the filling effect. It is apparent that only the warp satin and the 3x1 twill need be cut by the card-cutter on this type of design. The filling satin can be inserted by the card repeater.

There are some fabrics in which every alternate pick forms a plain weave, or other basic weave, in conjunction with warp ends. One such fabric is the common two-shuttle Brocatelle, usually made on 4x4 box looms and generally used as a drapery or upholstery fabric. A variation of this is the Matelasse construction used as upholstery, which may have two face picks and one binder pick, the binder pick forming a plain weave with the binder warp. Some mills combine some arrangement of cam harness shafts with a Jacquard for weaving these fabrics. However, in many cases the binder warp is controlled by the Jacquard along with the figure warp. When a positive weave is used for the binder warp it need not be represented on the design at all, but can readily be repeated by means of a master set of cards.

The foregoing outlines some of the ways in which a card repeater may be used to reduce designing and card-cutting costs.

Although the card-cutting machine represents a considerable investment, it does not require a highly skilled operator. An average mill operative can be readily trained in its use. Under the supervision of a competent technician who can co-ordinate the use of the machine with the work done by the designer and card-cutter, the card repeater can be used in many different ways to effect savings in costs and increase production of the Jacquard cards. All of this is in addition to its primary function of making duplicate sets of cards so that more than one loom may be operated simultaneously on the same style.

Textile School Deans Meet

The National Council of Textile School Deans at its recent conference in Princeton, N. J., elected Richard S. Cox, dean of the Philadelphia Textile Institute, as president, and George Walker, president of the New Bedford Textile Institute, as vice-president.

In recognition of his outstanding contributions to textile education, both in England and the United States, Professor William E. Morton of Manchester (England) College of Technology was elected an honorary member of the group.

Reports from the eleven textile schools showed a total enrollment of daytime students slightly exceeding 4000, and about 1100 will be graduated this year.

Subjects discussed included the following: Better cooperation with industry in order to (1) more fully fit students for industry and (2) attain greater interest in school graduates; accreditation; liberal arts vs. textile technology; preparation of and sources of supply for textile school teachers; personnel services—responsibility for student welfare; evaluating services of faculty members; and inter-institutional cooperation and coordination in textile affairs.

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Mill Practices Discussed at STA Meet

Carding ● Maintenance ● Warp Preparation
Weaving ● Spinning ● Technical Controls
Standards ● Industrial Relations

Staff Report

THE NORTHERN North Carolina-Virginia Division of the Southern Textile Association met in Danville, Virginia, on April 15, for their first meeting of 1950. The mill men present were guests of the Dan River Mills, Inc., and were welcomed to the meeting by Raymond E. Henderson, manager of Dan River's grey mills.

Mr. Henderson pointed out in his short talk that there had been considerably greater progress made in this half century in other mechanical industries than in the textile industry. Whereas the auto industry, the radio industry, electronics, and a number of others had almost their entire life within this era, textiles had shown little fundamental progress. However, he confidently predicted that there would be more scientific progress in textiles in the next five years than in the past fifty.

To back up his statement, he called attention to the progress being made in the scientific selection of raw materials to assure the right fiber for the job. He also spoke of the revolutionary changes expected in carding and spinning. There are, he said, a half-dozen different concerns, both in this country and in Europe, that are working on revolutionary looms. From these developments he expects to see important changes.

Following Mr. Henderson's address of welcome, Division Chairman Walter Vincent, assistant superintendent of the Schoolfield Division, Dan River Mills, turned the meeting over to the speaker of the morning, Reverend Kenneth Goodson, of High Point, N. C., who presented an excellent talk on "Human Relations."

As is customary at meetings of the Northern N. C.-Va. Division, the meeting was divided, after the main address, into eight sections, each confining itself to a specific topic.

Carding. The discussion group on carding was led by Irvin L. Payne, superintendent of Mills 1 and 2, Schoolfield Division, Dan River Mills. In a series of questions dealing with the grinding of cards, it was found that the number of hours between grindings varied from every 210 hours (2,200 lb) to every 600 hours (9,000 lb). The popular middle ground seemed to be at about 400 hours (4,000 lb). It was, however, generally agreed that grinding more often gives better results in succeeding processes.

In a discussion of three-point grinding, some mills felt that it is unnecessary to do so complete a job on every grind. This depends, however, on the quality required.

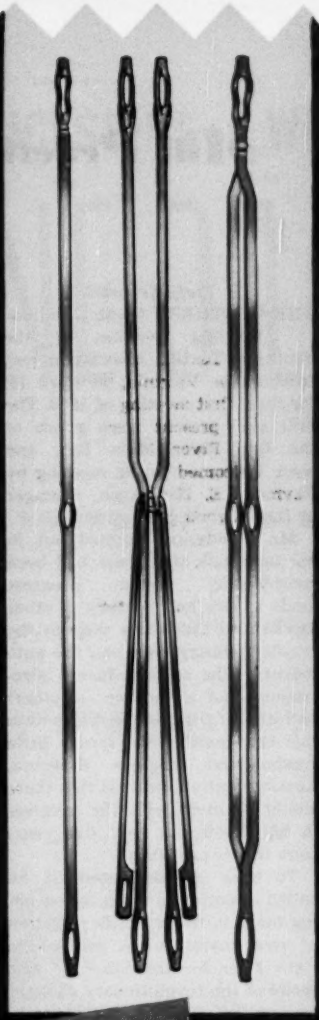
In answer to a question of how many cards are assigned to one grinder to maintain and lubricate, the lowest number was 57—set up 2 cards; the highest was 70—set up 2 cards.

Other points of interest which

Left, **M. J. Hundley,** Dan River Mills, Inc.; **W. L. Davis,** Dan River Mills, Inc.; and **A. H. Hinshaw,** Cone Mills Corp., get together before the meeting for a little talk about textiles. Over 250 textile men attended the meeting which was divided into eight sections for discussion of various phases of textile manufacturing. Photo at right was made in carding section.

"Textile Industries" staff photos

WHERE WARP YARN MEETS METAL
MAKE SURE IT MEETS
Ste-hed-co



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developed during the discussion were:

Card screens should be pulled and cleaned every six months.

Licker-in speeds at the mills represented varied from 450 rpm to 500 rpm.

Lap time in the picker room should run about 7 minutes for a 50-yd lap.

Aluminum knurled rolls have proved satisfactory as dust rolls on cards.

Maintenance. A. G. Singleton, Fieldcrest Mills, Spray, N. C., acted as chairman of the maintenance discussion. After several questions on the selection of valves for air and steam lines, on which there was no general agreement, the discussion turned to repair of shafting. It seems to be general practice to use "metalizing" equipment for this type of work, and the mills have had excellent success. Mention was made of a spray bond which eliminates the need for turning the surface of the shaft before metalizing. Several mills have had success in applying stainless steel to mild steel rolls and shafts.

In spite of the fact that many industries have shown maintenance savings in replacing light tubes on schedule rather than waiting for them to burn out, it was the practice of all mills represented to wait until tubes burned out before replacing them. When it came to a question of starters, most mills agreed that the reset starter is most satisfactory.

Warp Preparation. Discussion of warp preparation was presided over by Horace W. Buchanan, head of warp preparation, Erlanger Mills, Lexington, N. C. The use of an incentive system was the first topic discussed, and it was agreed by those who had tried such a plan that quality is better, tenders are better satisfied, wages are higher, and output is greater under a good incentive system of pay, providing quality is included in the incentive pay plan.

Further in the discussion, the question of dent combs came up. A representative of a mill running rayon stated that straight combs are best for filament yarns, but the zig-zag comb is preferred for spun yarn.

It was also agreed that occasional running of a slasher at slow speed does not make soft places in the beam.

Weaving. As chairman of the section on weaving, C. A. Davis, Fieldcrest Mills, Spray, N. C., first brought up the question of humidity. It was generally agreed that 80% relative humidity is standard for the average cotton weave room. Coarse counts required less humidity, about 75%, while spun rayon runs best at about 72%. The amount of moisture left in the warps at slashing was stated to be 6%.

Later discussion brought out the following points:

Compounded oils are satisfactory for looms with open bearings but not satisfactory for wick-fed bearings.

Oil-impregnated bearings were recommended for Draper loom batteries, but use with harness sheaves is questionable.

It was suggested that looms be run at 10% lower speed than that recommended by the manufacturer, but it was stated that the loom foundation has much to do with speed. One mill reported they were running the same type looms at 10% higher speeds on the solid first floor than on the weaker upstairs floor. Best operation was noted when using cushion pads under the looms.

One mill reported the use of a tension shuttle eye for 19s cotton filling, with very good results.

Spinning. Conducted by Ralph Going, superintendent of Fieldcrest Mills, Draper, N. C., the spinning group first discussed the ball bearing spindle and the roller bearing front roll. Not many of the mills have tried these, but those who had reported fairly good results except that they found it hard to keep ball bearing spindles plumb.

One mill reported success with a device used to clean tails from bobbins at the spooler. It consists of a metal plate with a **V** cut in it, fastened to the end of the spooler. Bobbins are scraped against the sides of the **V** to clean them.

In answer to a question on traveler life, various mills reported an average of from 120 to 144 hours.

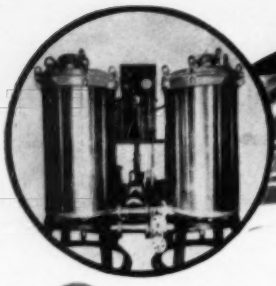
Technical Controls. H. M. McNeill, head of control laboratories, Dan River Mills, acted as chairman of the section on technical controls. Reports of practices in this section showed less uniformity of system than in most other fields. On the question of checking picker laps for uniformity, for example, mills reported as follows: Once a day; once a week; once a month. Permissible tolerance in lap weight varied almost as much as frequency of checking. Some mills allowed only plus or minus ¼ lb, while others allowed as much as a pound. While there was interesting discussion in this section, mills appear to differ considerably in application of technical controls.

Standards. The conference on standards under the direction of C. J. Schwem, chief time study engineer at Dan River, took up the question of changing work standards. It appeared that the mills represented by those present kept studies constantly in progress to determine changes in work loads that required a change in standards. It was thought that a change of five to ten per cent in conditions required a change in standards. One mill reported that some weaving rates change as often as once a month.

The problem of incentives for indirect workers was also discussed, but no definite conclusions were reached.

Industrial Relations. The section on industrial relations was directed by T. Lynwood Smith, director of personnel and public relations, Adams-Millis Corp. In the early part of the discussion dealing with foremen, it was suggested that second hands and overseers be officially termed foremen. It was felt that this would raise their statue.

The consensus was that part of the cost of company pensions should be borne by employees.



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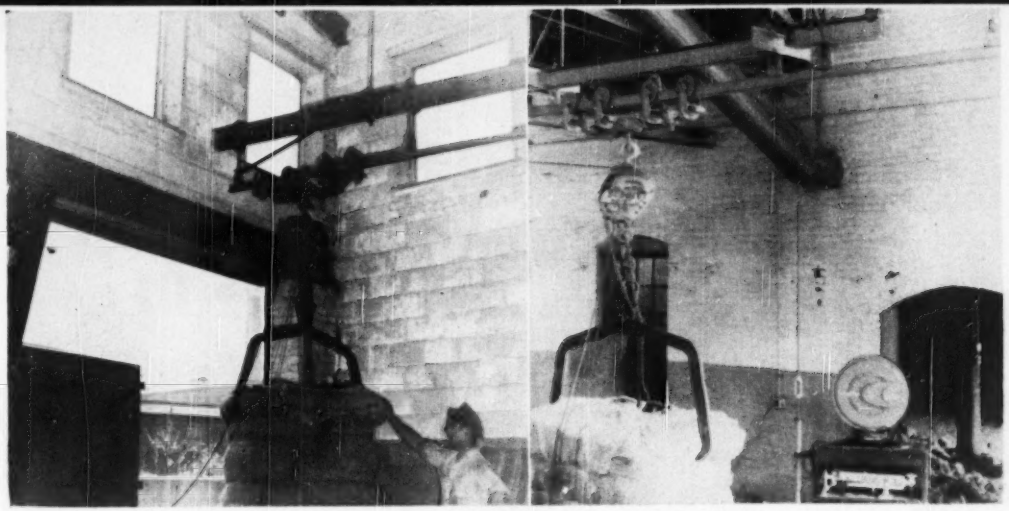

Conveyor extends to truck dock (left) at which point bales are grappled by means of tongs, hoisted to transport level, and delivered into the wool storehouse. Right, bales are weighed on the way to storehouse tiers.

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Staff Prepared

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Key to the system is a "live" six-foot section of track on the monorail which is link-connected to a 2250-pound capacity scale. Bales must pass directly over the weighing section on route from the loading platform to its assigned tier space. Mechanical linkage is compensated for, and the indicated reading of the transported load is the true weight in every instance.

Bales are lifted from the truck dock and railroad siding by a grappling hook attached to a one ton hoist which rides along the conveyor. From the weighing section, three tracks branch out to various sections of the storehouse and meet to form a continuous circuit.

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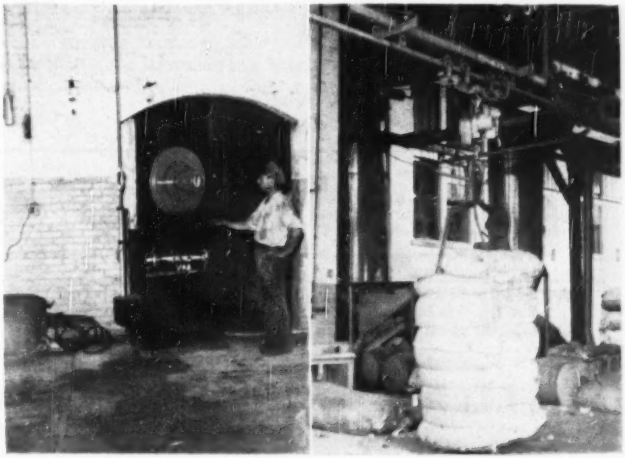
A one spot reading scale (left) is connected by linkage to a "live" section of the conveyor. Operator is shown obtaining correct weight. Right, after weighing, bales are conveyed along tracks to assigned tier in the storehouse.



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Carding and Spinning Discussed

By Georgia Operating Executives

Subjects Discussed

Licker-in Wire on Pickers
Card and Drawing Maintenance
Continuous Strippers
Sliver Cans
Fluid Drives
Sliver Weights and Card Speeds
Overhead Cleaning
Drawing Top Rolls
Anti-Friction Roll Bearings
Fiber Strength and Fineness
Evenness Testers
Narrow Spinning Tape
Nylon and Oil-Impregnated Saddles
Cleaning Spinning Frames
Non-Sloughing Filling Cams
Slugs in Yarn
Spindle Vibration After Oiling
Slugs and Loom Stops
Filling Spinning
Starting New Spinning Rings
Slub Yarn "Pattern"
Plush Covered Scavenger Rolls
Foster 102 Winders
B-C Spoolers

*Staff Report**

Licker-in Wire on Picker Beater. Only one mill had experience with replacing a conventional picker beater with a beater covered with licker-in wire. In this instance a licker-in type beater was tried in the breaker section of a picker. This type beater extracted better quality waste and caused more neps, although a more even lap was produced; however, the beater was abandoned because it had a tendency to load and damage easily.

Card and Drawing Maintenance. Thirty-two out of thirty-five mills indicated that their card grinders took care of card maintenance. Two mills delegated card maintenance to maintenance crews, and one mill failed to state who performed the job (See accompanying tabulation of card maintenance practices.)

Five mills had their card grinders maintain some drawing frames, and eight mills employed a fly frame section man, or a fixer to tend to drawing frame maintenance. Twenty-two answers pointed out that card grinders are not required to maintain any drawing, but these answers failed to indicate who did maintain drawing. Drawing frame rolls are cleaned on schedules ranging from once a week to scouring twice a year.

Continuous Strippers. Most mills are taking advantage of any savings brought about by eliminating cylinder strips through use of continuous strippers. Several opinions indicated that the type of work being run should be considered in determining whether it is worthwhile to improve quality by taking out additional fly and flat strips equal to the amount of cylinder strips saved. One mill had no reduction in cylinder strips attributable to using continuous strippers.

Sliver Cans. Among the Georgia mills reporting, there are two common methods for increasing the amount of sliver deposited in a can. One method is to decrease the rpm of the can, and another is to compress the sliver by applying pressure on the sliver at the calender rolls. Both practices are applied on cards and finisher drawing, and the cans hold approximately 20% more sliver. The advantages of putting more sliver in each can as reported are: (1) improves quality due to less piecing; (2) 25% saving in creeling at fly frames; and (3) saves labor in doffing.

The cost of changing a card from 12" to 14" cans was $27.78

*For a complete report of the carding topics discussed at this spring meeting of Textile Operating Executives of Georgia, see page 127 of the May, 1950, issue of TEXTILE INDUSTRIES.

Corrective Measures for Bad Carding

1. Check feed mechanism.
2. Examine licker-in bearings.
3. Look for defective cylinder bearings or doffer bearings.
4. Look for bad calender rolls.
5. Examine coiler head for improper operation and tension on rolls.
6. Replace bad clothing on cylinder, doffer, or flats.
7. Be sure settings are accurate.
8. Check cylinder and doffer for warped places.
9. Replace rough doffer comb.
10. Examine trumpets for defects.

Corrective Measures for Bad Drawing

1. Look for bad rolls or roll collars.
2. If weight is off on stock, change draft gear, check card sliver, and picker lap weights.
3. Buff top rolls.
4. Straighten steel rolls.
5. Set gears properly.
6. Adjust tension from front roll to calender roll.
7. Straighten calender rolls and roll necks.
8. Correct trumpet setting and use correct trumpet.
9. Examine bearings and gears for lubrication and settings.
10. Check for chokes on rolls, scrub rolls, and check condition of stock being fed.

per delivery, according to one mill. The cost of augmenting card calender rolls to compress the sliver more was approximately $1.00 per card for springs. Increasing compression on drawing calender rolls ranged from $10.00 per delivery to $57.00 per delivery.

Fluid Drives. Fluid type individual drives were used with good results on picker beaters in one mill. This drive had the same hp rating as the standard drive, and no maintenance has been necessary on the installation; whereas maintenance on standard drives was continuous in this instance.

One report on this subject related experience with two types of fluid drives on roving frames. Power tests showed no significant saving in power as compared with the conventional drive. In this instance a disadvantage was noted in the variation in speed from beginning to the end of the doff.

Sliver Weights and Card Speeds. Eight mills prefer running light sliver with fast doffer speeds on yarn counts ranging from 3.5s to 42s. Five mills prefer running heavy sliver with slow doffer speeds on yarn counts ranging from 17s to 30s; however the consensus was that light sliver and fast doffer speeds were more suited to fine work. Heavy slivers were recommended for high production.

Overhead Cleaning in Card Room. Experience with automatic overhead cleaners was favorable in five mills using this type of cleaner. Some of the advantages set forth for this type of ceiling cleaner were: saves labor; permits better quality work; keeps ceiling clean; cleaning costs minimized; and prevents slugs in yarn.

Twenty-five mills, using compressed air to blow down overhead, had cleaning schedules arranged to blow down at intervals ranging from once in eight hours to once in 192 hours. The most common interval recorded was once in eight hours. Type of cotton used included grades from Middling 7/8" to Strict Middling 1 1/8".

Drawing Top Rolls. Fourteen mills specified a preference for metallic top rolls on drawing, and six mills preferred synthetic top

Data on Card Maintenance

Mill	Grinding Frequency Hrs	Grinding Frequency Lbs	Setting Backs	Setting Tops	Cards Per Grinder	Cards Ground Per Day Per Grinder	Cards Ground (hrs)	Oiled By
A	190	2500	2*	2*	47	2	8	grinder
B	——	2800	1*	2*	47	2	6	grinder
C	288	2592	2*	2*	36	3	——	grinder
D	360	3600	3*	3*	33	2	3-4	grinder
E	240	1200	3*	3*	67	3	6	oiler
F	368	6200	368 hrs	368 hrs	68	3	5-6	grinder
G	336	3696	2*	2*	42	3	——	oiler
H	384	4600	768 hrs	768 hrs	34	2	7	oiler
I	264	1452	528 hrs	264 hrs	22	2	7	grinder
J	240	1440	3*	3*	35	2	1	grinder
L	249	2400	54 days	27 days	44	6	6	oiler
N	248	4464	1*	2*	47	2	8-10	grinder
O	264	2640	1*	1*	45-52	2	6	grinder
Q	264	3100	1600 hrs	1600 hrs	33	3	——	oiler
R	360	4965	360 hrs	360 hrs	74	2	16	sec. man
S	240	——	480 hrs	480 hrs	60	2	6	grinder
T	384	3648	36 days	36 days	38	2	——	oiler
U	210	1890	630 hrs	630 hrs	56	3	7	grinder
V	216	2592	432 hrs	432 hrs	54	2	6	grinder
W	160	2800	3*	3*	——	3	6	grinder
X	340	4400	2*	2*	57	2	7	grinder
Y	264-321	1404-2700	4 months	3 months	24-39	3	5	oiler
Z	327	2300	1*	1*	82	2	7.5	oiler
AA	324	4536	2*	2*	27	2	24	grinder
BB	300	5000	2.5 months	2.5 months	20	2	6.5	grinder
CC	400	4500	800 hrs	800 hrs	40	2	8	oiler
DD	600	7800	2*	2*	99	2	8	oiler
EE	288	3190	576 hrs	576 hrs	——	3	6.5	grinder
GG	450	3600	900 hrs	900 hrs	38	2	6	grinder
HH	650 (flats only)	8000 (flats only)	3 months	3 months	90	none	——	grinder
II	300	3000	72 days	36 days	33	4	6	grinder
JJ	360	3600	3*	3*	46	2	8-10	grinder
KK	184	1656	368 hrs	368 hrs	69	2	8	grinder
LL	360	6833	360 hrs	360 hrs	65	2	7	grinder
MM	220	3080	660 hrs	660 hrs	80	3	3-5	oiler

* Grinding intervals

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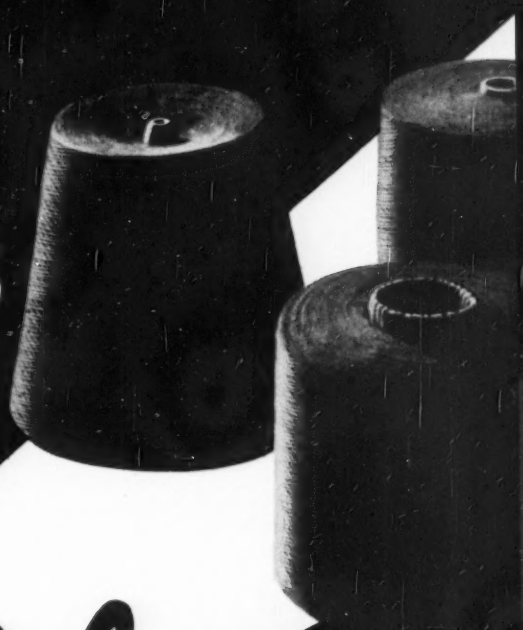

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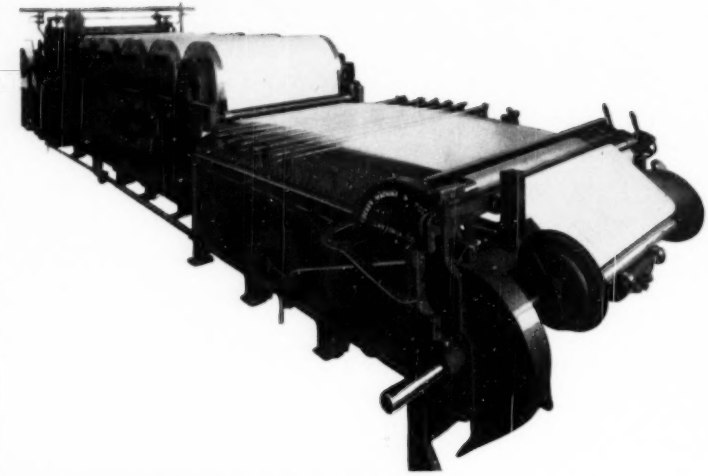

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- Patented Automatic Friction Control permitting operations at high speeds without heating of friction.
- Finger tip control of tension on yarn.
- Push Button Control.
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- All moving parts fully ball bearing.
- Heavy machined cast iron frame eliminating vibration at high speed.
- Instant speed changes to 90 yards per minute.
- Counter clocks measuring yarn as it enters Size Box and as it is taken up on loom beam permitting instant calculating of stretch.
- Complete with Cut Marker, Cut Marker Indicator, Speed Tachometer, Combs and Comb Adjustments, Motor and Steam Fittings.
- A complete Machine for making quality warps efficiently and economically.

Cocker Machine and Foundry Co., Gastonia, N. C.

WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE WARP PREPARATORY EQUIPMENT

rolls. Four first choices specified were cushion rolls, and one of these used cushion rolls only on combed stock; metallic on low grade stock. Leather covered rolls were first choice in two instances.

Comments during the meeting pointed out that ermine type clearers were doing an excellent job in addition to having a long life on drawing. Interest was aroused in the Dan River type clearer which one mill was using. This clearer was described as an apron type revolving clearer with friction drive.

The average per cent variation allowed on first and second process drawing varied considerably from mill to mill. On breaker drawing, specifications ranged from 2% to 25.46%; on finisher drawing, 2% to 27%.

Anti-Friction Roll Bearings. Experience with ball or roller bearings on top rolls of roving frames revealed favorable results. Installation costs were considered justified, and advantages noted were: smoother draft; easier to keep clean; less oiling; better traction; save labor; save oil; cleaner work; save roll picking.

One mill spokesman revealed that ball bearing rolls have been in service for 20 years in his plant, and they have given satisfactory results. Although no cost comparison could be made, the only replacement part used is a spring. Life of the spring is 20 years, and the cost is 11c per spindle. The rolls are lubricated with vaseline twice a year; there is no down time, and labor cost is 3½c per spindle. Roll cost is 18c per spindle per year.

Checking Fiber Strength and Fineness. Only one mill reported checking all cotton for bundle break, fineness, and selecting bales to stay within certain limitations. In this instance, the nep count improved under the controlled conditions. The ends down per thousand spindle hours improved in spinning stock, controlled by checking. When controlling stock within limits, no change in standard roll settings is necessary. This mill was using 1 1/32" Middling cotton.

Other practices in checking cotton were confined to testing approximately 10 per cent for selecting the desired fiber properties.

Evenness Testers. Eighteen mills revealed experience with some type of evenness tester, and mill standards of variation in different processes ranged from 2.5% to 20% on card sliver; 2.5% to 29% on drawing sliver; and 18% to 40% on roving. The staple of cotton used included ⅞" to 1 1/32".

During the meeting, a program was explained wherein Saco-Lowell sliver testers were used in routine testing. A new evenness tester was also used in this mill. A definite program was employed on a representative basis to improve each process. The procedure for testing cards and drawing in this mill is to make five tests of 20 yds each from every card and every drawing delivery. Standards for variation were set, and this system identifies any machine producing stock outside of the control limits, making it possible to isolate the machine and use the testers to detect trouble on journals, trumpets, rolls, or any other cause of variation. According to this report, the instruments are very reliable, although they are sensitive to atmospheric changes.

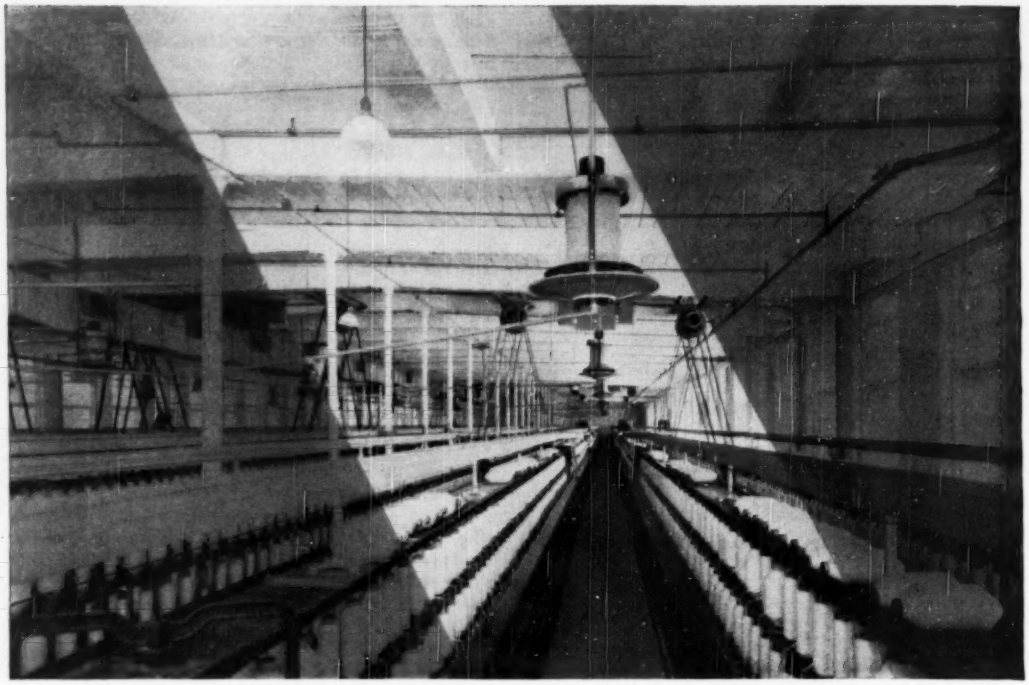
Narrow Spinning Tape. Among those having experience with both ¾" and ⅝" spinning tape, two recorded answers indicated that ¾" tape had longer life, four indicated no difference noted, and four claimed longer life using ⅝" tape. One mill obtained longer

Ga. Carding, Spinning Meet

- ► Roll Bearings
- ► Fiber Strength
- ► Evenness Testers
- ► Spinning Tape
- ► Continuous Strippers

Stripping Schedules and Maintenance Data on Cards Equipped with Continuous Strippers

Mill	Stripping Cycle		Stripping	Continuous Stripper	
	Cylinder	Doffer	Device	Maintained by	Cost per year
A	3.5 hrs	———	vacuum	———	———
B	at grinding	24 hrs	roller	grinder	$10.00
C	3 days	4 hrs	roller	grinder	———
F	144 hrs	24 hrs	hand stripper	overhauler	20.00
G	24 hrs	8 hrs	vacuum	overhauler	———
H	8 hrs	———	vacuum	grinder	———
	2 weeks	———	roller	———	———
L	120 hrs	24 hrs	roller	overhauler	10.00
N	24 hrs	8 hrs	brush roll	grinder	21.00
O	———	———	———	grinder	———
Q	120 hrs	24 hrs	vacuum	grinder	———
	264 hrs	as needed	roller	———	———
S	at grinding	24 hrs	roller	grinder	———
V	at grinding	24 hrs	———	grinder	———
Y	24 hrs	———	roller	overhauler	———
CC	144 hrs	24 hrs	roller	grinder	15.00 to 20.00
LL	at grinding	24 hrs	hand roller	overhauler	———



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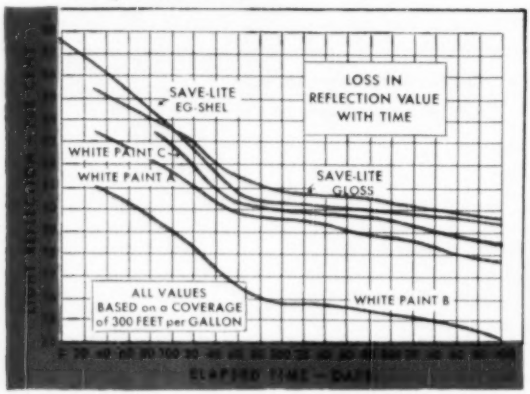
SAVE-LITE EG-SHEL
LOSS IN REFLECTION VALUE WITH TIME
WHITE PAINT C
WHITE PAINT A
SAVE-LITE GLOSS
ALL VALUES BASED on a COVERAGE of 300 FEET per GALLON
WHITE PAINT B
ELAPSED TIME — DAYS

SAVE-LITE STAYS WHITE LONGER!

Note how Save-Lite retains its reflective qualities, or whiteness, longer than any of the other typical interior white finishes used in this test. Similar tests with the same finishes show Save-Lite to have better opacity and higher initial whiteness as well.

To insure better seeing conditions for your people—longer—look for these things when you buy a Mill White Finish:

1. **High light reflecting power**—the percentage of light reflected by the paint is a measure of its whiteness.

2. **Ability to remain white indefinitely**—you are buying whiteness—will the paint that you apply *stay* white?

3. **Covering capacity**—it takes a paint with maximum hiding power to supply maximum light reflectance at lowest cost per unit area.

4. **Durability**—the paint you put on now will be the foundation when painting schedules again call for refinishing. Make sure that foundation is as sound 5 to 10 years from now as it is today!

Sherwin-Williams Save-Lite Finishes provide a complete line of brilliantly *whiter* interior finishes because all of these factors are accurately controlled. Save-Lite not only gives greater coverage per gallon and higher light reflectance but it retains its whiteness and reflective qualities longer (see chart). These facts are borne out not only in laboratory tests but in year-after-year experience in leading textile mills the country over.

Before selecting your interior finishes, let a Sherwin-Williams representative demonstrate the advantages of Sherwin-Williams Kem Save-Lite—the *whiter* White! The Sherwin-Williams Co., Cleveland 1, Ohio.

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life of tape using 5/8" material on Saco-Lowell frames, but this same mill noted no difference between the life of 5/8" and 3/4" tape when used on H&B frames.

Five mills asserted that more uniform spindle speeds were obtained by using 5/8" tape; two claimed 3/4" tape gave more constant speed, and one noted no difference. Opinions were equally divided regarding any additional twist inserted by using narrow tape.

Nylon and Oil-Impregnated Saddles. The average life of synthetic long draft aprons, as reported in 14 answers to the question, varied from one year to six years. Results with nylon saddles and cap bar tips were equally opposed. Half of the mills answering the question reported good results; the other half were not satisfied with their experience. There was no conclusive evidence as to results obtained with oil-impregnated wood saddles, although eight users claimed superior performance for this type of saddle.

Cleaning Spinning Frames. Gouts were increased in yarn in three plants employing traveling overhead ceiling cleaners in spinning. In one instance no difference in gouts was noted. Manual overhead cleaning was done in the spinning rooms equipped with overhead ceiling cleaners, and the schedules varied from eight hours with machines running to 120 hours with machines stopped.

Experience with underframe cleaners was related by one mill man at the meeting. This spokesman stated that the equipment performed satisfactorily, but lint collects around oil wells and spindles. Although no figures were available on reducing gouts, the speaker claimed fewer gouts were in evidence.

Someone asked for comparative figures on the number of ends down using the underframe cleaner. In answer to this question the spokesman said that no figures were available, but the underframe cleaners helped reduce the number of ends down, and the spinners like it.

Non-Sloughing Filling Cams. According to fourteen answers to a question on non-sloughing filling cams, such cams should have two short points and one long point. Five opinions favored three identical points on non-sloughing cams.

Reporting at the meeting, one man said that he had non-sloughing cams on most of his frames, and performance was satisfactory. Filling is not conditioned in his mill; the yarn has soft twist and is made from low grade stock. A light traveler is used. The stroke is longer on a 8 7/8" quill. The traverse is 7", using a 1 5/8" ring. The cam action on the traverse ties down each preceding layer of yarn on the bobbin and prevents sloughing. Yarn numbers are 3's to 12's.

CAUSES OF SLUGS IN YARN

1. Poor quality roving.
2. Ends down in spinning.
3. Blowing down in cleaning.
4. Clearer waste.
5. Loose cots on spinning rollers.
6. Roll picking.
7. Flying lint.
8. Bad rolls in spinning.
9. Faulty work from drawing frames.
10. Wild ends
11. Dirty top and bottom rolls.
12. Spinners running out thread boards.
13. Creeling in new roving.
14. Dirty back guides.

Slugs and Loom Stops. The percentage of loom stops caused by slugs in yarn, as reported by six plants, included a low figure of 2% to 3% and a high figure of 25%. 8% to 10% was the most common percentage of stops attributed to slugs in the yarn.

Filling Spinning Practices. Most Georgia mill men agree that the fast ring rail stroke should be on the downward motion to prevent filling sloughing in spinning. The strokes recommended and practiced included 1 1/2" to 2 1/4" on yarn numbers from 3s to 42s. One report, from a mill spinning 110s yarn, recommended a stroke slightly longer than the ring diameter. Another man suggested using a stroke of the same length as the diameter of the ring.

The number of ends down per thousand spindles per hour varied considerably. With few exceptions, those answering this question had from 20 to 45 ends down per thousand spindles per hour.

Starting New Spinning Rings. Commenting on breaking-in new spinning rings, one speaker stated that he decreased the frame speed when new rings were installed. On 10s warp, the usual speed in this mill is a mile a

Ga. Carding, Spinning Meet

- ► **Nylon Saddles**
- ► **Cleaning Spinning**
- ► **Non-Sloughing Cams**
- ► **Slugs in Yarn**
- ► **Filling Spinning**

Preventives for "Fuzzy" Yarn

1. Maintain correct humidity in all departments.
2. Change travelers more frequently.
3. Use good cotton.
4. Set cards and drafting rolls properly.
5. Reduce speed in winding from bobbins.
6. Keep proper amount of oil in cotton.
7. Do not use close settings on snick plates.
8. Obtain good drawing sliver.
9. Avoid excessive drafting.
10. Replace worn thread guides.
11. Maintain uniform twist.
12. Use proper traveler size and weight.
13. Buff top rolls more frequently.
14. Check trumpets for proper shape and size.
15. Reduce speed in carding.
16. Set front rolls as close as possible to apron.
17. Use good rings in relation to the length and diameter of bobbin.
18. Prevent the yarn from ballooning against separators.

- ► Starting New Rings
- ► Slub Yarn "Pattern"
- ► Plush Covered Rolls
- ► Foster 102 Winders
- ► B-C Spoolers

minute. This man said that a mixture of sulfur and olive oil applied to the ring aids in breaking in new rings. A light traveler is installed to start new rings, and twelve traveler changes are made, increasing the weight one number each time until the rings are broken in.

Another spokesman said the olive oil mixture was helpful in his plant, but the speed was not reduced when changing travelers on new rings. Most Georgia mills use light travelers in starting up new rings.

There were two "standard" methods employed in breaking in new rings. The first is to begin with a very light traveler and increase the weight of the traveler at various intervals as the rings wear in; the second is to reduce speed to start and use the same traveler that is run in regular production. In both instances, speeds are reduced in some mills and kept constant in others.

Slub Yarn "Pattern." There was one suggestion in figuring spacing for slub bars to prevent the slubs from making a definite pattern in the cloth. The procedure is to select a number corresponding to the amount of slubs needed in one pattern repeat of the chain, so that neither the sum nor any one will divide exactly into the cloth width. If the cloth width is expressed in inches, the figures represent the inches apart the slubs should be spaced in the yarn.

Foster 102 Winders. According to practices, weaving yarns are run at higher speeds than knitting yarns on Foster 102 winders. The range on weaving yarns included a low figure of 305 ypm and a high figure of 550 ypm. The low on knitting yarns was 300 ypm; the high, 450 ypm. Most Georgia mills do not vary bobbin spindle distance on Foster winders to control ballooning at various speeds. At the meeting, one man said that his mill uses an average setting of 18" for plied yarns, and 13" was the setting for single yarns on all speeds.

The performance of 51A slub catchers was favored by a majority of those answering this question. The comb type slub catcher was preferred in two instances, and one of these mills liked them on knitting yarns.

B-C Spoolers. There seemed to be some misunderstanding regarding the definition of mechanical failures causing end breakage on B-C spoolers. The percentage of end breakage attributed to mechanical failures varied from .75% on 30s to 40s yarn (1560 rpm drum speed), to 22% on 12s yarn (1360 rpm drum speed). A majority of the mills answering this question indicated that they cleaned B-C knotters once each week, and most schedules called for overhauling knotters as mechanical condition warrants.

ADVANTAGES OF PLUSH COVERED SCAVENGER ROLLS

1. Spinning rolls need covering less frequently.
2. Cleans front roller better
3. Has longer life than others.
4. Easily stripped and cleaned.
5. Reduces lapping.
6. Fewer ends down.

T. M. Hampton, Hillside Plant, Callaway Mills Co., LaGrange, Ga., conducted the forum on spinning.

MEASURES TO PREVENT SPINDLE VIBRATION AFTER OILING

1. Use correct amount of oil.
2. Increase frequency of oiling.
3. Replace worn bolsters.
4. Keep spindles clean.
5. Oil on weekends while stopped.
6. Use correct oil.

An oral report at the meeting indicated that the best method to determine whether or not the knotter is tying slip knots is to stop the drum and let the knotter tie 30 or 40 knots; then check to see if the knots are satisfactory. A majority of the written answers to the question agreed with this procedure, although there was some slight variation in practice from one mill to another.

Southeastern AATCC Schedules Outing

Members of the Southeastern Section of the American Association of Textile Chemists and Colorists are planning a summer outing to be held at Radium Springs, Ga., on June 9th and 10th. This is the first occasion of this sort to be held by the Southeastern Section, and plans are made to have a full schedule of fun and entertainment for all guests, including ladies.

Registration will begin Friday at noon, June 9, and everyone is urged to arrive as soon as possible Friday afternoon.

Radium Springs is located approximately four miles south of Albany, Ga., and facilities there are said to be excellent for the outing. A number of sports activities have been arranged for all guests.

Members of the Piedmont and South Central Sections, prospective members and friends are invited and urged to attend. Further information is available by addressing Howard McCamy, Pepperell Manufacturing Co., Lindale, Georgia, chairman of the outing committee.

Novelty Slub Effect Printing Device

By J. R. STEWART

IT IS possible to produce a great variety of effects by making a few simple modifications on an intaglio printing machine without using any specially engraved rollers. Existing equipment can be used, and the machine can be run on regular work as the need arises. Any type machine utilizing three colors or more can be so modified.

The accompanying illustration shows the arrangement for securing novelty effects. The material to be printed enters at (A). Blanket and back-grey, if used, remain in contact with the printing cylinder (H), but the fabric is directed away from the cylinder by an adjustable roller (B). This roller is supported by an adjustable bracket which slides on the machine frame (D). The fabric contacts the printing cylinder at (G), where it is nipped by a printing roller (G), plain or engraved, which is driven in the usual way from the central star wheel.

While the fabric is held away from the cylinder, it comes in contact with print roller (E) which is adjustable. The adjustable print roller is supported by standard bearings, but it is not pressed against the cylinder. It is driven by chain sprockets fitted to the mandrels of (E) and (G). A bicycle chain and sprocket suffices for the drive, and it is desirable to install the sprockets to the mandrels on the side opposite the box wheel which drives (G). The chain drive is marked (F).

Print roller (E) is supplied with print color in the usual way by color box, furnisher roller or brush, and doctor knife, as shown. Roller (G) and any other rollers (G_2) to (G_4) may operate as usual.

The effects produced by roller (E) can be varied by:

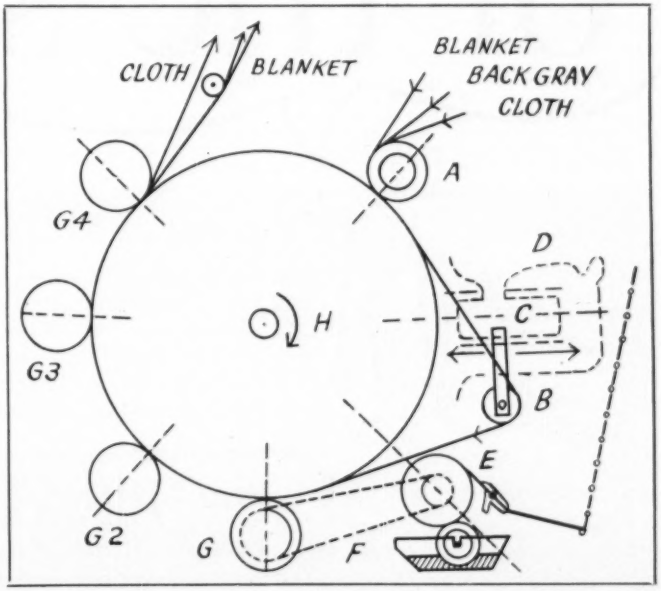
1. Type of engraving employed.
2. Type of fabric being printed.
3. Degree of contact between roller and fabric.
4. Altering speed relation of cloth and roller surface.

This arrangement is particularly effective for simulating slub (or knop) effect cloths, linen imitations, and many others. Only the ridges of the yarn or ridges on the cloth may be printed if desired. Slight or "haze" effects simulating colored-woven goods are obtained by using a fine picot or stipple roller. In this instance roller (E) is regulated to have only slightly faster speed than the cloth has.

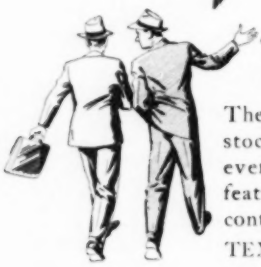
Warp-printed effects are produced by taking a floral "blotch" roller with heavy hatching lines in position of (E) and using good heavy contact between cloth and roller. Greater depth of penetration can be obtained by setting (E) to press the cloth against the cylinder. Rollers (G) to (G_4) may be used simultaneously to give regular pattern overprints, or discharge-resists in relation to the fancy pattern produced by roller (E).

The accompanying sketch shows a side elevation of a modified printing arrangement. The only materials needed for this conversion are a guide roller (B), and a pair of bearing brackets for the roller (C) which can be made from steel strip or bar, suitably bent and drilled. The chain (F) can be allowed to run slack to give scope in adjusting the roller (E), but there is no objection to having the slack side tensioned by spring-loaded pulley, should extra tension be found necessary.

Sketch of printing machine modified to produce novelty effects.



let's get our costs down out of the sky



"... with those new Reading Machines we could produce 15 dozen pairs of the finest quality stockings in eight hours."

• • •

The new "Reading" Machines are producing full-fashioned stockings of superior quality and at higher speeds than ever before possible. Many exclusive "Reading" features give higher precision and greatly simplified control in operation . . . 30 sections . . . 51 and 60 gauge.
TEXTILE MACHINE WORKS • READING, PENNA.

The "READING"
Full-Fashioned Knitting Machine

Air Conditioning and Refrigeration Aid Efficiency at Gotham Plant

PLANT construction features and integral air conditioning and refrigeration system offer advantages in controlling temperature and relative humidity in full-fashioned plant. System helps minimize machine adjustments to compensate for variations in settings which occur with changes in atmospheric conditions. Serves to control factors affecting nylon yarn, size, and length of stockings.

Staff Prepared

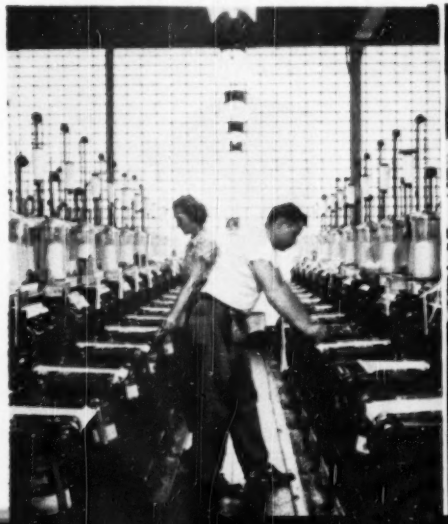
EXCLUSIVE

THE Crossville (Tenn.) plant of Gotham Hosiery Company, Inc., has an air conditioning and refrigeration system which was included as an integral part of the original structure. Production in this plant is confined to 15 denier nylon stockings which are looped and seamed before being shipped to another plant for finishing.

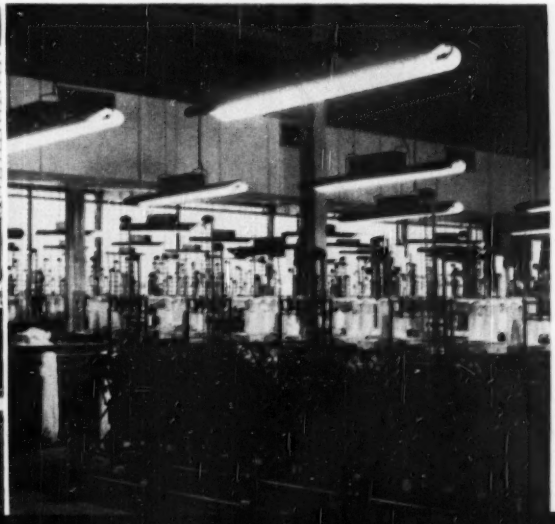
The smoothness of knitting operations at Gotham is attributed largely to the uniform atmospheric conditions maintained by the air conditioning system which provides constant control over temperature and relative humidity. The building is equipped with a Carrier air conditioning system which dehumidifies, refrigerates, and circulates air in dry ducts throughout the knitting room. A special room was incorporated in the original structure to house the pumps, spray chambers, and other parts of the air conditioning system.

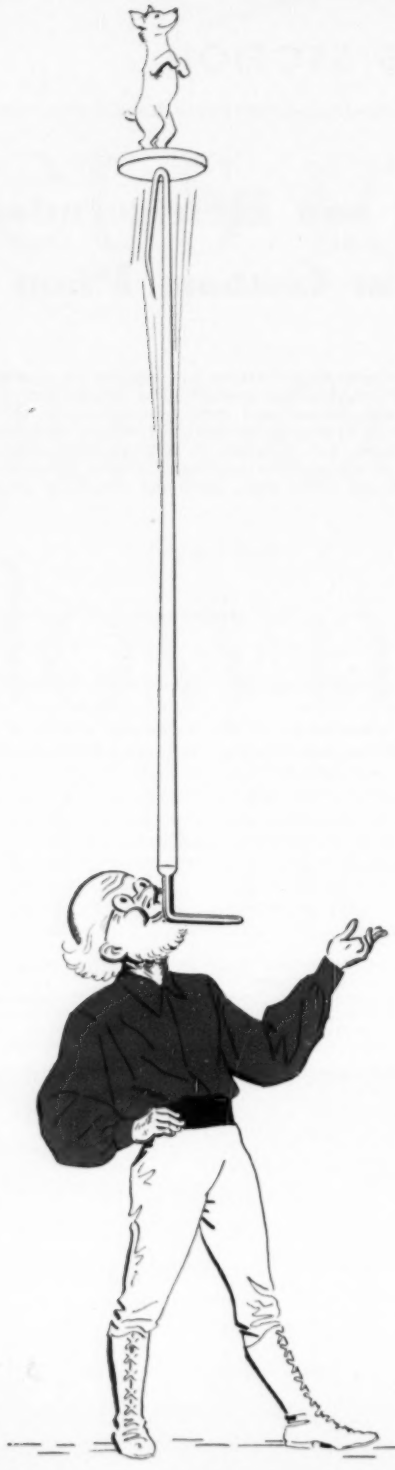
In this mill, temperature of 80 degrees F and 50 per cent relative humidity are maintained year around for knitting room operations. Water for air conditioning is supplied by the local water system, although the plant is located in a rural area. A built-in blower chamber serves the spray chambers which wash the supply of air with water. Louvers are located both inside and outside of the building to control the amount of fresh air brought in from the outside to freshen the air being circulated on the inside. Cooling is accomplished by using compressors which operate in conjunction with two evaporative condensers and a "chill water" charged with Freon

A typical row of Wildman single-unit, single-head, 54-gauge machines with semi-automatic welt turners in operation at Gotham. The oil can on each machine serves as a receptacle for broken needles, sinkers, and dividers.



Showing overhead ducts for Carrier air conditioning and refrigeration system which maintains 50 per cent relative humidity at 80 degrees F in the knitting room. The system is automatically controlled by a dew point thermostat and three Hygrostats. Tolerances are: variation of 1½ degrees in temperature; and a 2% variation in relative humidity.





Balanced performance

The high degree of "recoverability" in Textile Spring-Beard Needles is *built in.* Careful balancing of needle resiliency and needle length results in smoother knitting . . . superior performance.

Every step in the making of Textile Spring-Beard Needles is planned to give you better knitting. Textile's quality controls—automatic and electronic—are your assurance of this dependable performance and better fabrics.

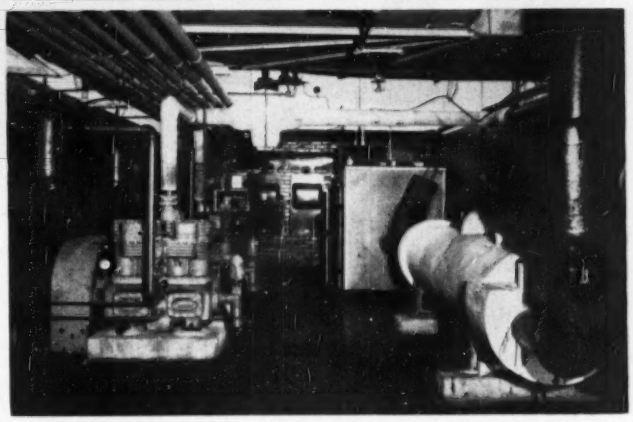
TEXTILE MACHINE WORKS, READING, PENNA.

Textile

SPRING-BEARD NEEDLES

For Full Fashioned and Warp Knitting

Above, air conditioning room with spray chambers for Carrier system. The chambers were incorporated in the design of the building as an integral part of the structure. Pump for the spray chamber is located at right. There are two sets of louvers: one for the recirculating air inside the building; the other for drawing fresh air from outside. G. E. Barclay examines the automatic temperature control which can be set to any selected dew point. Inside louvers can be seen at right center.



Top photo, view of Gotham Hosiery Company's Crossville plant showing type of construction which is said to allow good air conditioning for hosiery production. Lower photo, compressors for the air conditioning system are shown at left. Right, "chill water" charged with Freon cools the water used to wash air in the spray chamber.

coolant in the coils.

The system is automatically controlled by a dew point thermostat and three Hygrostats which do not allow the temperature to vary more than plus or minus 1½ degrees. The humidity is controlled within tolerances of plus or minus 2%.

The building has approximately 31,000 square feet of floor space, and is constructed of brick with structural steel supports and girders, concrete floor, and glass block side lighting. The construction features of the building help maintain a high degree of efficiency in air conditioning.

The modern plant houses 300 single-unit, single-head Wildman 54-gauge full-fashioned machines which are installed and driven in groups of twelve from a line shaft powered by a three hp motor utilizing V-belt drive.

Yarn Supplies to Fit Basic Needs

Since the end of the war, knitters have gone into many novelties. Often these different items required sorts of yarn not used before.

Some of the yarn manufacturers went into these experiments in good faith, in expectation that when and if the new ideas got across there would be volume business in the yarns. As far as now can be ascertained, spinners lost out in these ventures. Not enough sustained demand was generated.

This postwar phase of sale yarn improvisation is about ended. Even the largest sources of specialized synthetic yarns have trimmed down their production to fit the known needs. However, no fault is found with the enterprising plans of the knitters.

Formerly, whenever a valued account sought to introduce something radically different, his yarn sources were anxious to cooperate so as to engender good will. And if the project attained financial success, it would eventually redound to the benefit of the yarn men. In the last couple of years, however, there has been a tendency in spinners' operations to become more or less stabilized. In part, this became desirable because yarn mills do not now have the same degree of control they had in prewar times, as to cost of suitable cotton and their outlay for labor.

You can do it better with

TURBO

- Preboarding
- Boarding
- Preboarding and Boarding
- Crimp-Setting
- Steam-Setting

Turbo Machines are precision-built to give you increased production, better qualities in the processing of fine gauge, fine denier Nylon hosiery . . . on half-hose . . . on crimp-setting Nylon staple . . . on steam-setting of Nylon sweaters.

Turbo gives you completely automatic operation. Nothing for the operator to do except to dress and undress the forms. Instantly interchangeable leg forms. Quiet in operation. Minimum steam consumption.

Get the Turbo story—and see for yourself why some of America's leading mills have found it practical to scrap outmoded equipment and standardize on high-production Turbo Machines. Booklet on request.

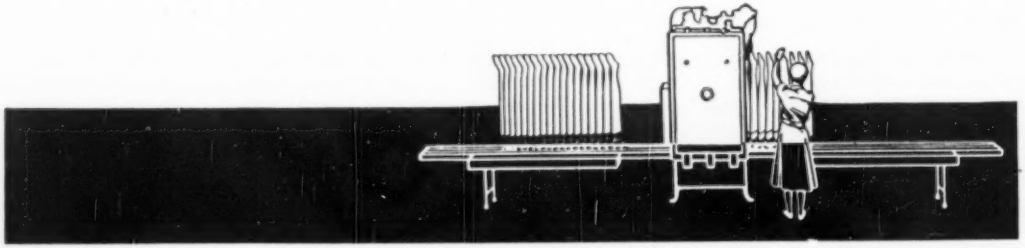
Production Is Up . . . Costs Are Down

TURBO PREBOARDER: Production is 145 dozen pairs in 8 hours with one operator. Two groups of 18 forms each—you can run two sizes at one time. Boards remain upright—fabric can't creep.

TURBO FINISH BOARDER: Production is 250 dozen pairs in 8 hours with two boarders. Four groups of 12 forms each—you can run four sizes at one time. No service employee required to straighten piles.

TURBO MACHINE COMPANY, LANSDALE, PA.

Southern Representative: F. W. Warrington Co., Charlotte, N. C.



Feeder Tipping Tool for Circular Knitting Machine Fixers

By ERNEST BRIDGES

CHANGES in design of some machine parts frequently call for special tools which will enable the machine fixer to make adjustments easily and quickly.

Shown in the accompanying illustrations are two feeder tipping pieces used on Komet machines. Fig. 1 shows the old style tipping piece No. 203355. Fig. 2 shows the new style piece found on all late model machines. Note how the screw (C) in Fig. 1 fits into the tipping piece (B) and presses directly against the feeder (A).

On the new style tipping piece (Fig. 2) the part (a) is split and threaded. The guide (b) screws onto the threaded end of the tipping piece (a), causing it to grip the feeder. The guide (b) has an oblong shaped head which requires a wrench of some sort to loosen and tighten the guide when it is necessary to make feeder tipping adjustments.

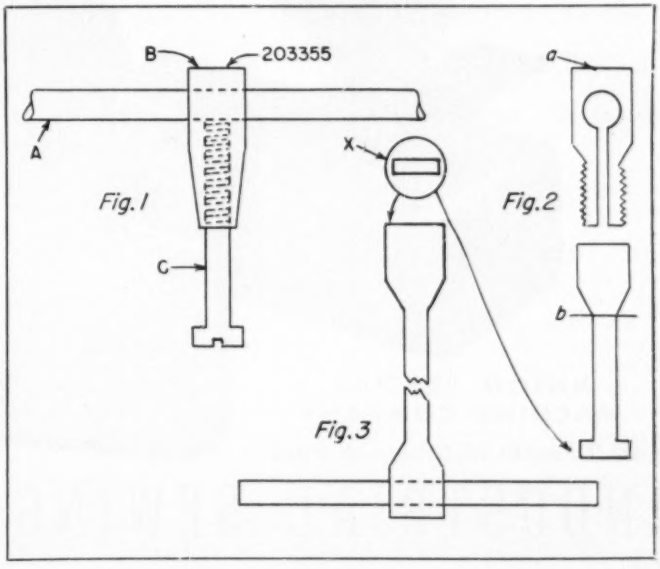
A socket wrench, designed for making the adjustments, is shown in Fig. 3. The hole in the end of the wrench at (x) fits the head of the guide (b). The body of the socket wrench is made of 3/8" round cold rolled stock about 3 1/4" long. The handle is 3/16" cold rolled stock about 2 3/4" long.

To make the socket, use a 1/8" drill and drill two holes side by side about 1/4" deep in the wrench. Use a piece of lathe turning tool and shape it to match the head on the guide. Then drive the tool into the drilled holes to form the socket shown at (x) in Fig. 3. Case harden the socket to make it tough and prevent wear and distortion on the slot and other parts of the tool while it is in service.

The reason this tipping piece was redesigned was because the screw (C) in Fig. 1 sometimes breaks off in the tipping piece when it is tightened securely. When a screw breaks it is difficult to get the feeder out of an old style tipping piece without damage to the feeder.

The next time you have such troubles, try this simple method: Use a small, narrow, grinding wheel in a hand grinder; grind a groove through the tipping piece above the feeder and parallel with it; then spread the tipping piece with a screw driver, and the feeder will come out easily.

Showing some details of the old style feeder tipping tool as compared with the new style tipping piece. Note how the screw (C) in Fig. 1 fits into the tipping piece (B) and presses directly against the feeder. On the new style tipping piece part (a) is split and threaded. The guide (b) screws onto the threaded end of the tipping piece (a), causing it to grip the feeder. The guide (b) has an oblong shaped head which requires a wrench of some sort to loosen and tighten the guide when making adjustments.



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All of the facilities and resources of Union Special Machine Company are concentrated on one objective: *industrial* sewing machines—specially designed TO HELP YOU CUT COSTS, IMPROVE PRODUCTION! The Union Special products you order today are actually more than just sewing machines. In every sense of the word, they are modern MACHINE TOOLS, each highly developed and precision-built for specific production jobs. And never have they been a *better* investment . . . FOR TODAY . . . FOR THE FUTURE!

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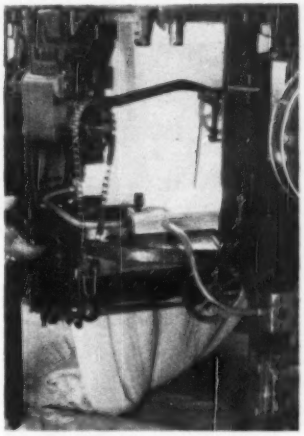
INDUSTRIAL SEWING MACHINES

Inspection Lights for Jacquard Knitters

THOUGH few knitting machines as received from the supplier feature built-in lighting circuits, it is advisable to install lights at critical on-machine inspection points to insure adequate illumination so that the knitters can observe the fabric being knitted.

One method of illuminating Jacquard circular knit work has been worked out by mechanics at the Boulevard Knitting Co., Long Island City, New York. A battery of two fluorescent lamps was added to each Jacquard knitter. Mounted on the machine's base so that the tubular cloth passes between opposing light sources, the high visibility from these fluorescent lamps permits rapid examination of the goods as it is being taken up. Any defect appearing on either side of the cloth is clearly silhouetted.

The installation is simple. Fixtures for the lamps are bolted to the base. Wiring is protected in ¾-inch conduits appropriately bent and secured. A switch box is mounted on one leg and also contains two outlets for trouble-shooting light extension cords.



Close-up of lighting system installed on Jacquard knitting machine at Boulevard Knitting Company, Long Island City, N. Y.

Altered Cam Bracket For K Machines

EDITOR TEXTILE INDUSTRIES:

On Scott & Williams K machines, cam bracket No. 8266 has a square edge as shown in the sketch. By cutting this square edge off and buffing the rounded surface we find that the yarns do not loop over the bracket when the yarn drops in from idle position during yarn changes. This is especially true in striping yarn changes where two or four courses are run.

The change has been most helpful since nylon yarn has become extensively used. The difficulty occurs more frequently on nylon work because nylon yarn has a lot more "life" than other yarns.

TRANSFER LOOP FORMING CAM BRACKET

When the yarn drops in from idle position, if it happens to be in position over the bracket, the rounded edge will permit it to roll over the bracket and complete the yarn change without any difficulty. If the edge is left square, sometimes the yarn does not loop over the bracket, thereby causing a defective or waste stocking. We do not claim this change effects a cure-all, but it is effective enough to save much waste.

CONTRIBUTOR No. 8228

Liberal Fall Buying to Begin Sooner

In the knitwear industry, as well as in other branches of the textile-apparel field, developments during the last four months have shown that various adjustments as to prices and volume of forward orders came earlier this year than last, and even in 1948. The explanation for this has been that wholesale and retail distributors this year aimed to keep inventories to a lower average point than a year or two years ago.

In some quarters, experienced operators in knitwear markets point out that, in the end, the industry will find advantage in this. In certain respects this notion is confirmed by a comparison of conditions now with those which produced similar effects in the past.

For one thing, producers of knitting yarns and knitted fabrics and garments seem at this writing to react by curtailing operations wherever possible. So far as can be ascertained, no excessive unsold stocks of manufacturing materials of finished merchandise are now being carried in the inventories of the knitting trades. They talk and hope for a rally, but if it doesn't materialize most of them will not be seriously hurt financially.

A MAJOR ANNOUNCEMENT BY

WILDMAN

THE NEW *Adaptable*

30" INTERLOCK MACHINE

FOR
SPORTSWEAR
UNDERWEAR
DRESS FABRICS
OUTERWEAR

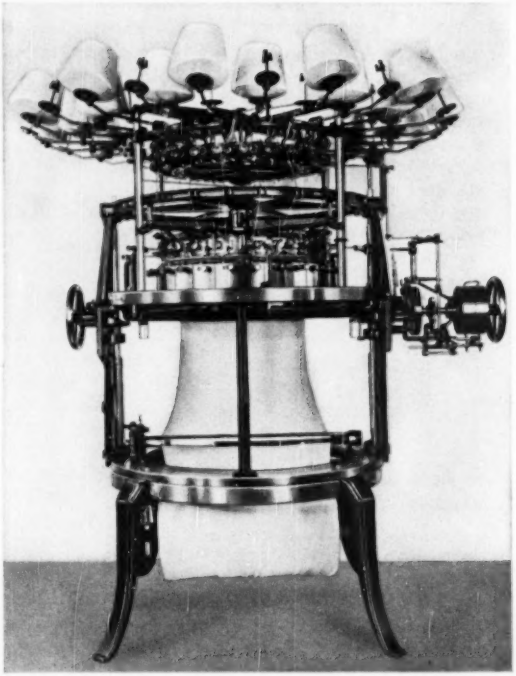
Wildman is pleased to present this newly designed INTERLOCK MACHINE, adaptable to such a wide variety of uses—many, many cuts and feeds for Sportswear, Underwear, Dress Fabrics, Outerwear.

This machine is built in a special size frame to provide ample width in the take up for the exceptionally wide fabric produced.

Designed, too, with the finest mechanical equipment for maximum efficiency . . .

Popular sizes 26" and 30". Also other sizes from 15" up. Furnished in all cuts up to 24 needles per inch.

Let us tell you more about the adaptability of the Wildman Interlock Machine to your needs.



WILDMAN MFG. CO., Norristown, Pa.

Knitter Hints
No. 32

Pull Threads at Seaming Operation

Don't:
Start at the welt and stroke down.

You can cause pull threads

Note that furniture, baskets and working surfaces are cloth covered to reduce possibility of pull threads. Rough hands and stroking the hose can also cause considerable damage.

This knitter Hint appears through the cooperation of Charles O. Simms.

Suggestions for

Maintaining Boarding Equipment

- **vents and steam piping**
- **retort maintenance**
- **rack speeds**
- **maintaining forms**
- **ventilation**

THE Paramold setting machine, known in the full-fashioned industry as a "preboarder," sets the hosiery to the desired size and shape before the dyeing operation. Sometimes the preboarders are located side by side and are fed from a high pressure steam main located overhead. The retorts usually exhaust into a common exhaust header, which in turn exhausts into a flash tank suitably designed for the purpose. The tank is vented to the atmosphere, and the condensate from the flash tank empties into the sump for the heat reclaimer.

Vent Needed. Although the piping for the exhaust system for the preboarders is carefully engineered, the machines may not operate properly unless the end of the exhaust header most distant from the flash tank is vented. This can be done by connecting a 2" pipe into the exhaust system just above the riser for the last machine on the line, then running this pipe out through the roof. Inasmuch as this problem created quite a discussion among maintenance department officials and steam fitters in one mill before a solution to the problem was found, it should be carefully noted by others who may encounter a similar problem.

As soon as the aforementioned change in piping is made, erratic operation of the machines will cease, and they will begin to function as they should.

Retorts. The mechanism inside of the retorts must be kept free of nylon sizing or the triggers that operate the racks will fail to function properly. This will lead to a loss in production. The bronze belts that are part of the trigger must be free from corrosion or they will be bent when the rack is inserted in the machine.

Rack Speeds. The speed at which the rack is returned from the machine is determined by the height of the rear legs on the retort. To regulate the speed of the rack, raise or lower the rear of the machine. This can be done by adjusting the set screws furnished as part of the foot assembly.

Forms. The forms should be free from nylon sizing when the machine is started at the beginning of each shift. Otherwise, the hard size deposits will cause picks, pull threads, and other damage to the stockings. The slightest nick or burr can cause hundreds of dollars worth of damage to hosiery unless detected and corrected in time. A daily inspection of hosiery forms is recommended.

The Paramount finishing machines require very little attention except for periodic lubrication and regular maintenance to prevent picks and pulls.

Piping. All piping in the boarding and preboarding room should be suitably covered with 85% magnesia pipe covering. A layer of canvas should be placed over the covering, and the covering should be sized before applying two coats of enamel paint.

Ventilation. Exhaust fans can be arranged in suitable locations to help keep the room at a comfortable temperature. An exhaust duct system over the fronts of the retorts may serve to remove moisture and vapors in maintaining comfortable working conditions.

EXCLUSIVE

By S. H. BOYER

What's a beautiful finish worth –

if the stocking isn't perfectly knitted!

A beautiful finish is a powerful selling point. But it needs to be backed by perfect knitting to bring repeat sales. Safeguard your sales and your reputation with precision-made Torrington Needles.

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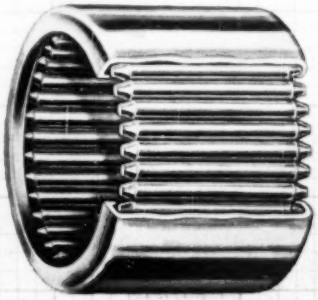
carry lubricant, too

To reduce the need for frequent service attention
In all types of machines, Torrington Needle Bearings
carry a large reserve of grease or oil.
The turned-in lips of the outer shell ride close to the shaft,
and form an effective seal that helps
retain lubricant and keep out dust and moisture.
Small diameter rollers carry an even protective film
to all bearing contact surfaces.
Often Needle Bearings can be lubricated for life at installation.
Let our engineers help you design efficient lubrication
and other Needle Bearing
advantages into your product.



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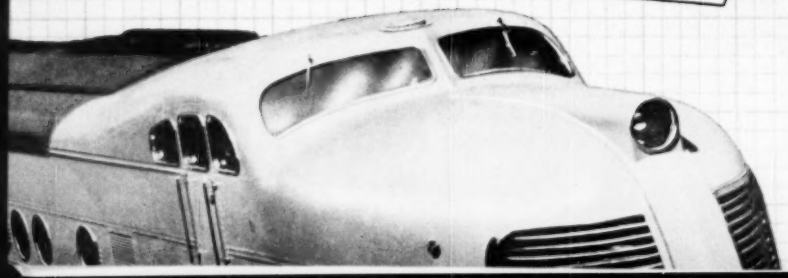


NEEDLE
SPHERICAL ROLLER
TAPERED ROLLER
STRAIGHT ROLLER
BALL
NEEDLE ROLLERS

Technical Symposium Highlights Knitted Outerwear Meet

Staff Report

CENTER of interest for mill men attending the National Knitted Outerwear Association's 32nd annual convention on April 25-26 was a technical forum conducted by question and answers. A summary follows:

"Textile Industries" staff photos

The technical forum panel during NKOA's 32nd annual convention stimulated discussion on many industry problems.

Size Standards. Considerable controversy evolved over the issue of adapting industry-wide size standards. A claim was made that size standards are entirely possible for straight jersey knits which constitute approximately 80% of production. Opposition stated that the rapidly changing styles, knits, and fiber characteristics encountered annually make it impractical to create any set table of sizes. It was felt that some application could be found for arm holes and widths, but length was outside the domain. Consensus was that a "perfect" mannequin should be decided upon as a basis for functional fitting, i.e., the size is acceptable if the garment fits the mannequin.

Moth Proofing. Cashmere sweaters have been subjected to particularly damaging moth attack. It was expressed that the trend would be toward more moth proofing. Chemical agents for the purpose manufactured by Geigy Co., Inc., and General Dyestuff Corp., effectively guarded against moth damage without altering hand, it was said. One claim was that "moth proofing survives the sweater."

Nylon Ribbing Stretches. Sweater ribbing knitted of nylon yarn was reported to suffer loss of snap-back after dyeing. It was advised that "semi" presetting the sweater before sending it the dyer will cause the sweater to retain the shape. Another approach suggested was to experiment with a coarser denier nylon staple yarn for the ribbing. Knitting the rib on the narrow side and somewhat longer might allow for elongation, according to some comment. Nylon sweaters should be pressed with steam and not hot iron.

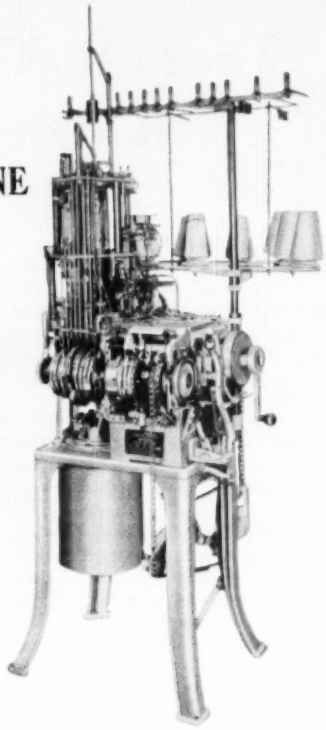
Nylon Pilling. Complaints were being received due to pilling of nylon in sweaters. It was commented that nylon doesn't pill any more than wool, but due to the superior strength of nylon, the protruding end does not break off as is the case for wool. Thus, the pilling is permanent.

Crocking. The Quartermaster

Left, chatting together at the NKOA convention in the Basildon Room of the Waldorf-Astoria are, left to right, **Morris London,** Foster Yarn Corp.; **Paul Silver,** Gerard Knitting Mills; **Ingram Bergman,** Bergman Knitting Mills; and **Lindsey Mason,** S & M Dye Works. Right, examining an NKOA luncheon photograph are three representatives of the Swiss knitting industry, left to right, **William R. Staehelin,** executive secretary, Association of the Swiss Knitwear and Hosiery Manufacturers; **Arthur Dardel,** managing director, J. J. Kunzli & Co., Ltd.; and **Hans Kriesemer,** Handschin & Ronus A. G.

Little Socks that mean BIG Business

Made on the New Labor-Saving
INFANTS' KOMET LINKS-AND-LINKS MACHINE



The Infants' Komet Links-and-Links Machines are available in 2½" and 2¾" diameters, in fine and coarser gauges . . for knitting sizes 4 through 6½.

Here's the most significant development in the infants' sock business in many years: a new type of machine that produces an endless variety of Links-and-Links patterns and rib combinations in both tops and boots of infants' half sox and anklets. Picot edge is optional.

The machine is completely automatic, eliminates two machine operation and the staggering expense of hand transfer knitting.

Think what this means not only in costs and profits, but in terms of pattern variety, retailer interest and bigger sales.

Send for samples of hosiery and complete data.

S·W

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Established 1865

Sales Office: Empire State Building, New York 1, N. Y.
Divisional Offices: High Point, N. C., Reading, Pa., Chattanooga, Tenn.
MAIN OFFICE AND PLANTS: LACONIA, NEW HAMPSHIRE

Corps is preparing standard crocking samples to clarify their interpretation of "appreciable" staining of crock specimens now used as a guide to acceptance specifications.

Invisible Losses. Mills should figure on 8 to 9% invisible losses in winding, knitting, dyeing, and other processing when Bradford spun yarn is purchased on a 13% regain basis. A number of tests on Bradford spun yarns confirmed this figure. Fly loss alone amounts to 2%, as does the oil loss. Woolen yarn invisible loss totals 15%, and French spun yarns suffer a loss of 2 or 3%. A need for more accurate on-the-spot moisture regain testing methods was found. Standard procedures for testing moisture in the knitting industry were urged.

Skein Counts. Spot checking of skeins and the number of skeins per bundle was suggested as a remedy for checking yarn disappearances or weight variations. Dyers were asked to rebundle skeins after dyeing, and to count at this time. No solutions or agreements attained, but the attitude was that it would be to the best interest of dyer and spinner and knitter should the method of handling yarn be improved by some technical method.

Stain Removal. Carbon tetrachloride was recommended as a suitable spot cleaner provided that adequate safety precautions are observed due to the fluid's toxic nature. Perchlorethylene is preferred by some mills. Depending on the nature of the soil, the garment should be spot cleaned before dry cleaning. Light shades must be machine cleaned after spotting. In some instances, the lot can be screened for spotted fabrics, and these alone can be further processed. Rust spots can be extracted with oxallic acid ordinarily, though no one chemical can suffice for the many kinds of rust encountered.

Jersey Stitch. No visible differences are to be observed between flat and circular jersey knit stitches. The circular machine can make a tighter stitch, depending on how tight the locks are set.

Automatic Machines Featured at Knitting Show

Staff Report

OVER 7000 visitors to the 71st Regiment Armory, scene of the Knitting and Allied Crafts Exposition, attested to the huge drawing power of this first biennial show. Converging from all over the country and abroad, they were shown equipment especially unwrapped for the occasion.

The emphasis was on automatic machinery designed for high production and quality yield. Circular knitting machines shown revealed a trend toward more feeds and pattern effects. Pressing, trimming, finishing, and sewing machines generally featured increased capacity and versatility with consideration for the reduction of operating fatigue. Stop motions, cloth spreaders, cutting tables, flat knitters, and manufacturing accessories exhibited added refinements.

In many instances sales on the show floor more than covered exposition expenses. Suppliers and mill men expressed keen satisfaction and an intent to make this event a continued, recurrent calendar attraction.

Following is a brief description of some of the newer developments seen at the New York Exposition:

Truck for Narrow Aisles. A new truck is specially designed for narrow aisles. Available in vinyl coated duck or plain in various stock sizes. Chassis is patented construction of hardwood supports on bottom with casters fastened directly to supports.

Shown by W. T. Lane & Bros., Inc., Poughkeepsie, N. Y.

Aluminum Hosiery Tray. Dandux hosiery tray of aluminum is smooth with all welded construction for strength. It can be placed in the dyetank or steam room without removing the stockings. Can be covered in soft black suede-type cloth, reinforced with strong canvas webbing that also forms handy handles.

Shown by C. R. Daniels, Inc., 5553 Baltimore Ave., Philadelphia, Pa.

Chainstitch Machine. Type 1201 is a single-thread chainstitch machine with automatic lubrication, used for high speed seaming or hemming neckwear, umbrellas, etc., and for sewing facings and bindings on knit underwear or for label sewing. Equipped with positive measuring tension, self-threading eyelets, and visible-stitch index in arm. This machine has a longer and more elastic stitch than the regular machine and can chain-off fabrics without breaking the thread.

Shown by Willcox & Gibbs Sewing Machine Co., 214 W. 39th St., New York 18, N. Y.

Cutter and Clamp Units for Jersey Machine. The Brinton Style STWY jersey machine now features simplified cutter and clamp units. Each unit consists of seven parts, including one screw. The unit is fastened to the machine with two screws. Only one moving part to the mechanism.

Shown by H. Brinton Co., Kensington Ave. and M. St., Philadelphia 24, Pa.

Elevated Work Bench. Style U work bench is 33x18x18" high. A folding canvas work bench.

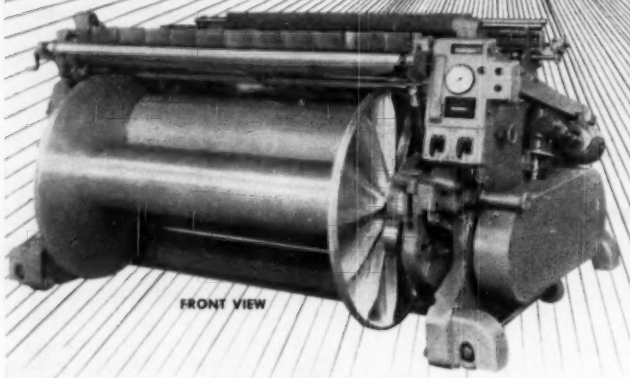
Shown by Meese, Inc., Madison, Ind.

Link and Link (Purl Stitch) Knitter. The tandem carriage fully automatic link and link (purl stitch) knitting machine is capable of making full cable stitches without any needles missing or floats. Possibilities: multi-colored float work with full control of the position of the floats; cable and rope stitches with no missing needles; intrasia and simulated embroidery designs; link and link

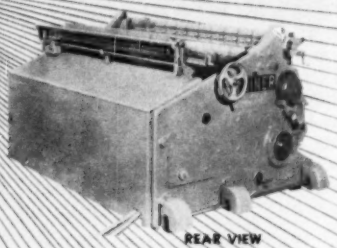
Announcing

A NEW REINER BEAMING MACHINE

(MODEL HD)



FRONT VIEW



REAR VIEW

Designed in cooperation with the trade, it supplements the well-known and widely used line of high speed Reiner Warpers. Model HD is the result of our experience in building preparatory equipment, and of our continuous and close contacts with progressive mill men throughout the industry.

SOME FEATURES OF THE MODEL HD

Spindle drive—Flange diameters from 26" to 36"—Length of beam to customers' specifications up to 72"—Suitable for dye beams—Speed range from 100 to 750 yards per minute through rheostat control. Independent adjustment for inching and starting speed, provision for foot-operated inching switch—Rheostat geared to presser roller to maintain pre-set constant yarn speed—Traverse motion to assure ridgeless beams—Electric beam doffing device.

Stop motions—Lateral motions to move unit easily from creel to creel—Comb oscillating movement—Double acting brakes on all rotating units for quick synchronized stop—Centralized control panel—Typical Reiner type heavy frame constructions—Lower over-all working height of machine—Comb arrangement permits easy access for operator—7½ h.p. direct current motor with generator.

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Schiffli Embroidery Machines (10 and 15 yards) with Automats or Pantographs—Bobbin Winding Machines (for Stitching or Quilting)—Tricot Machines (2 and 3 bar, 84" and 168")—Simplex (Double Knit) Machines—Kayloom Machines—Raschel Machines—Magazine Creels—Single Type Creels—Truck Creels—Four-Section Full Fashioned Hosiery Machines (up to 66 gauge)—Auto Heelers—Ready Spare Part Service for All Reiner Machines.

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borders on garments in conjunction with float and cable work; increased production.

Shown by Queens Machine Co., 280 Starr St., Brooklyn 27, N. Y.

Conveyorized Presser. The continuous assembly line type pressing machine comes with the basic unit 12 feet long; additional sections come in 4 ft lengths. Components: conveyor belt system, motor drive, and central heating element. The element is two feet wide and automatically adjusts to the thickness of knit goods passing through by a combination of spring and air pressure. Increases production.

Shown by American Safety Table Co., Inc., Reading, Pa.

Plain Circular Transfer Machine. The Model TA is for rapidly producing seamless jersey and two needle panel jersey garments, fully automatic. Effects produced: seamless plain jersey body with a 1x1 or 2x2 cuff; seamless jersey body with a two needle panel in reverse jersey; rib garments with a 1x1 or 2x2 cuff; simulated 2x2 rib in any part of garment. Two color striping at each feed is available if desired.

Shown by Jacquard Knitting Machine Co., G & Lycoming Sts., Philadelphia 24, Pa.

Knitmaster Reads Needle Position. The Knitmaster is a device which gives direct and immediate reading of needle position to give uniform, even fabric on all machines. Can set two or more machines exactly alike. Saves: material by giving fabric of proper weight, labor, time and changing materials.

Knitmaster Co., 411 Northeast 19th Ave., Portland 14, Oregon.

OT Transfer Machine for Jersey. The OT transfer machine is a fully automatic circular transfer interlock and rib machine which produces fine gauge jersey body with knitted-on 2x2, 2x1, or 1x1 bottom with cotton separation. Details: 8 feeds, 3-color yarn changers on all feeds, two speed drive, individual motor, for use with nylon or worsted (single or double ply).

Shown by Ordnance Gauge Co., Amber and Hagert Sts., Philadelphia 25, Pa.

Wevenit A24 Circular Rib. The Weveknit A24 circular rib knitting machine gives unrestricted selectivity of cylinder needles by means of one endless Jacquard steel film common to all systems. Can change pattern in two minutes. Has calibrated micrometric stitch adjustment, stationary bobbins, solid drive or cylinder and dial.

Shown by Dubied Machinery Co., 11-30 45th Road, Long Island City 1, N. Y.

Canvas Baskets. Elevated basket has standard height of 27", comes with steel or rubber casters. Oblong truck available in tilt-type or swivel. Oblong baskets available with hardwood runners, in various capacities.

Shown by Steele Canvas Basket Co., Inc., 15 Brook St., Newton 58, Mass.

Feed Control Stop Motion for Spring Needle Machine. No overhead wiring is a feature of the new feed control stop motion for Tompkins spring needle machines. Motion eliminates braking because it operates by cutting out the feed when a presser-foot is withdrawn from the needle at the time yarn is severed or when an entanglement is encountered. System permits additional feeds on the knitter without necessitating extra wiring.

Wesco stop motion shown on Tompkins machine.

Double System Purl Machine. Increased production, greater patterning scope, and simplicity are claimed for the double system purl machine. Features: dust-proof cams, interchangeable knock-over bits, automatic yarn carrier changes, patterning is automatic by means of pasteboard card apparatus.

H. Stoll & Co., Reutlingen, Wuerttemberg, Germany.

Two-Thread Hemmer. Style A-2DH-1 is a two-thread hemming machine recommended for general hemming on light or medium weight knit, cotton, rayon, or nylon. Provided with angled needle plate and pivoted spring tension. Style A-3DW is a three-thread double row differential feed machine with cutters, used for seaming on silk, rayon, nylon, light weight cotton knitted goods. Produces "W" stitch characterized by tight needle thread with balanced looper threads.

Shown by Merrow Machine Co., 28 Laurel St., Hartford 6, Conn.

(Continued on page 157)

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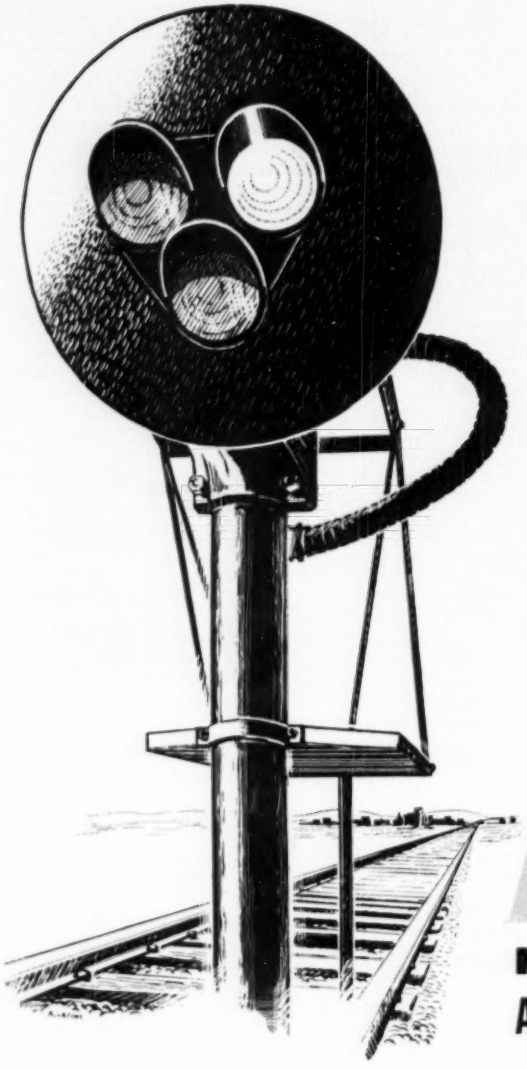

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A Clear Road to Level Shades!

Jacques Wolf's Lomar PW is a dispersant used particularly for vat and acetate colors—not a wetting agent! Lomar PW causes finer dispersion of the dyestuff and prevents agglomerates. It gives greater assurance for level shades and resistance to wet crocking and rubbing. Insures "speck free" dyeings. Equally successful results regardless of dyeing method. Can be used advantageously with all colors from pastels to deep shades. Gives excellent penetration with subsequent advantages. Lomar PW has great dispersing properties and in consequence is used in minute quantities.

For complete information on Lomar PW, contact us today. Write for your copy of Bulletin No. 21.

Plants: Passaic, N. J.
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Hole Detector. Said to protect cloth against continual holes and stops the machine immediately upon a press-off, the hole detector requires only one wire connection. Attach to spreader rod of machine and connect the wire to the lower contact ring.

Shown by Crawford Mfg. Co., Inc., New Brunswick, N. J.

Steam Tentering & Calendering Machine. Features: three roll calender, one steam heated, two cold rollers; cooling system to give cloth better feel; condensation chamber for separating steam and water; built in cloth retaining box. Comes equipped with all necessary piping, valves, etc. Has foot lever clutch control.

Shown by Kastrinsky Machine Co., Inc., 531 Stone Ave., Brooklyn 12, N. Y.

Trimmer. Self-contained thread trimming machine is designed for sectional work, small departments, or cramped quarters. Features: all steel welded table, fluorescent light, sealed in prelubricated ball bearing motors.

Shown by Ginsberg Machine Co., Inc., 224 Fifth Ave., New York 1, N. Y.

Flat Upright Knitting Machine. A redesigned machine on which the two side motions which normally controlled pattern changes on the slide bars have been condensed into one side motion, thereby eliminating more than half the parts. Unit contains a positive turning and locking action of the monitor that supports the pattern chain. Pattern pin combinations are made on one pin.

Shown by John Eppler Machine Works, American and Buttonwood Sts., Philadelphia 23, Pa.

Electromatic Thread Trimmer. The Clip-Matic is said to spot threads or loose ends, snip them off cleanly, and swish them away fast. The unit can be plugged into any electrical outlet and is ready for instant operation. Contains the suction adjustment regulator for different type fabrics.

Shown by Cutting Room Appliances Corp., 45 W. 25th St., New York 10, N. Y.

Multi-Feed Rib Machine. Feature of EEM super multi-feed rib machine is its compact camming system. Also has vertical type motor drive which permits a direct V-belt drive to the single vertical shaft that drives the cylinder, dial, and take-up. Multi disc overload clutch is standard equipment; bronze bushings are used.

Shown by Edmos Products, 13 Christopher Ave., Brooklyn 12, N. Y.

Marketing Policies Discussed At Hosiery Industry Conference

A RECORD turn-out of more than 500 hosiery manufacturers at the 13th annual Hosiery Industry Conference in Atlantic City heard Elmo Roper, public opinion analyst, shed light on women's use and attitudes toward hosiery.

Bound to have profound influence on future marketing policies, Mr. Roper's survey disclosed that only one per cent of the adult women questioned never wear stockings. Three quarters of the women questioned are using more stockings now than they were two years ago, the average being 4.3 pairs on hand.

While 85 per cent believe stockings are important to their appearance, more than three quarters of them try to select their stockings in neutral shades. White collar girls, the fairly prosperous, and young women are the best customers, the survey revealed. Furthermore, they buy more national brands and patronize selected shops. Women estimate that they purchase 14.4 pairs annually. Best stocking customers live in big cities and the Northeast. Very few women complained about stocking prices; two thirds don't ask for brand names; most don't ask for a definite gauge or denier.

In his address, Mr. Roper declared that the "major problem of the hosiery industry is not concerned with product and distribution," but in the custom of women sometimes going without stockings, which exists with "surprising evenness in all groups everywhere."

Highlighting the proceedings was the presentation of a Standards of Inspection for Women's Nylon Stockings which had been prepared by a special committee for hosiery technicians concerned with quality control. The Standards describe and illustrate types of defects which are permissible in first-quality nylons. It is felt that the effect will be upgrading, which will add to the confidence of the consumer and facilitate compliance by manufacturers with the marking requirements of the Trade Practices Rules.

In the Standards, women's full-length nylon stockings are divided into three zones. For each zone a limit on defects is specified for a stocking to be properly graded as first quality. Permissible yarn defects, mender defects, and knitting defects are described, and types of defects are illustrated in 15 photographs.

The following comments wer-

This new FIDELITY Skein Reeler permits each operator to handle four or more machines . . . a control automatically shuts off each machine when the predetermined skein weight has been reached. Machine down time is reduced by from 50 to 90% and labor efficiency is correspondingly increased. Compact, modern design streamlines your plant and provides the answer to lower manufacturing costs to meet competition.

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KALPINOL

KALPINOLS have been the leading trough solutions for knitting Nylon for years.

Nylon knit through Kalpinol Solutions makes a nice even stitch—even length fabrics—and a fabric which can be easily seamed.

KALPINOL #12 and "L" keep the troughs clean.

Send for our new folder on KALPINOLS which contains a lot of good information.

HYDROXY HAND CREAM keeps the operators' hands smooth.

K.N.K. (KALI NEEDLE KLEANER) keeps the size off of needles, sinkers and bits, preventing distorted stitches.

NYLOWASH—used for boiling off Nylon Hosiery. Removes the size and oils, allowing even dyeing.

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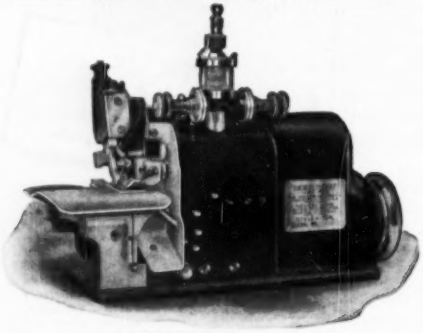

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American Yarn & Processing Company

Mount Holly North Carolina

made by speakers at the Hosiery Industry Conference:

Reid A. Maynard, chairman, board of directors, National Association of Hosiery Manufacturers: We are all aware of these problems and we know they are not going to be solved by talking about them, but will be solved when we and enough of our fellow citizens decide that too much government interference and too high a tax rate is not good.

Frank Pace, Jr., Secretary of the Army: Strong military forces are the best security against a future war. Expensive arms alone will not win the next war should one come, but a skilled, highly trained force to man the complicated technical equipment is also essential.

At the organizational meeting of the board of directors of the Association all of the present officers were re-elected for the coming year.

The following hosiery manufacturers were elected to the board of directors of the Association: Robert E. Chesebro, president, Hand Knit Hosiery Co., Sheboygan, Wis.; Henry A. Lineberger, sec.-treas., Knit Products Corp., Belmont, N. C.; Dan May, Chairman, May Hosiery Mills, Nashville, Tenn.; Hugh L. Merritt, secretary, Renfro Hosiery Mills Co., Mount Airy, N. C.; and Ferdinand K. Thun, president, Berkshire Knitting Mills, Reading, Pa.

AN EYE ON THE

KNITTING MILLS

A modernization program, including installation of new machinery and equipment, has been started at **Utica Knitting Co.'s** plant No. 9 at Anniston, Ala.

Land has been purchased by **Empire Manufacturing Co.**, successor to Empire Knitting Mills, for construction of a new plant in Statesville, N. C. The two buildings to be erected will contain 103,000 square feet of space.

Paul Simon, 140 Nassau St., New York, N. Y., is attorney and representative for the newly incorporated **Everest Knitting Mills, Inc.** The plant will manufacture outerwear.

Jackson Hosiery Mills, High Point, N. C., have been converted into a finishing plant, specializing largely in hosiery.

A license has been secured by **Holly-Knit, Inc.**, Mount Holly, N. C., to manufacture and use the tricot pre-setting machine which is owned and patented by American Viscose Corp.

Machinery from the mill of Georgia Manufacturing Co., which was recently purchased by **Lykens Hosiery Mills, Inc.**, is being moved to York, Pa.

Construction of a finishing mill has been completed by **C. W. Anderson Hosiery Co.** (Dapper Hosiery Mills), Clinton, S. C.

The mill and equipment of Wynwood Mills have been purchased by **Johnson City (Tenn.) Mills, Inc.** Facilities will be utilized for expansion in regular line of production.

Heathcote Hosiery Co. has moved its offices to 350 Fifth Ave., New York 1, N. Y., Rooms 4416-18.

An $80,000 expansion program, which will double the plant's tricot knit fabric productive capacity, has been announced by **Dorchester Fabrics, Inc.**, Summerville, S. C.

Milstron Mills, 18 West 21st St., New York, N. Y., was recently organized for the manufacture of knitted outerwear.

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For more than half a century, Manufacturers of Circular Knitting Machines for Underwear, Outerwear, Dress Fabrics, T-Shirts—Polo Shirts, Fancy Rib Hosiery Tops, Knit Gloves, Fancy Knit Gloves.
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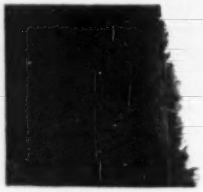
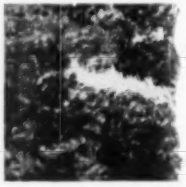


Fabric sample treated with a Cunilate, after 14-day burial in soil bed, showing no degradation.



Identical fabric sample without Cunilate, after 14-day burial in soil bed, showing complete degradation.

*Patents and Trademark pending.

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—and intensive testing, by industry and government agencies, have produced highly effective, non-toxic, permanent fungicides —Cunilates. Protect fabrics, thread, webbing, cordage, coatings, and other susceptible materials, against destructive organisms.

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Discussion on Bouncing Shuttles

Question Briefed: *When running a large shuttle and quill, we find that we have considerable trouble in adjusting the box on the loom to keep the shuttle boxing properly.*

If the adjustment on the shuttle box is made at the time the quill is full of yarn, we find that when the quill becomes approximately two-thirds to empty, the shuttle will not go home in the box.

If the box is adjusted when the quill is about two-thirds to empty, then when a full quill is transferred to the shuttle, the shuttle has a tendency to bounce out of the box and the loom slams off.

We are running an 8¾-inch bobbin, Columbian type shuttle, E-Model loom, and 5s to 14s filling yarn.

We should greatly appreciate any assistance that the readers of TEXTILE INDUSTRIES *may offer.* (CONTRIBUTOR NO. 8105, *October*, 1948.)

EDITOR TEXTILE INDUSTRIES:

Regarding the difficulty in boxing your shuttles, I assume that this difficulty is greater since CONTRIBUTOR NO. 8105 has changed to the larger filling package.

It is true that shuttle boxing is more difficult with larger filling packages. The difference between the weight of the shuttle and the bobbin, when the latter is full of yarn and when the bobbin is empty, is greater than it would be where a smaller filling package is used.

The Columbian shuttle with 8¾-inch bobbin is not an excessively large filling package, but I agree that it would be a little more difficult to have uniform shuttle boxing than with your old arrangement, whereby you used a smaller filling package. On the other hand, the size filling package in question is not uncommon, and it is being used in quite a number of mills. In fact, it is now a small package as compared to some mills on a comparable class of goods.

It has been our experience that the lack of uniform humidity causes more trouble in shuttle boxing than any other one thing. If the humidity conditions are properly controlled I don't think there would be an excessive amount of trouble with the size shuttle. CONTRIBUTOR NO. 8253

◆

EDITOR TEXTILE INDUSTRIES:

In reply to CONTRIBUTOR NO. 8105, who is having trouble with diminishing shuttle weight from full to empty bobbins on Draper Model E looms, I would say that unless the looms have been built over to take unusually large diameter bobbins, he should have no trouble from this source. Most of the mills today use an 8¾" bobbin on their Model E looms without encountering the slightest trouble.

It is my opinion that the trouble is caused by faulty loom adjustments. It does not seem possible that the relatively small difference in weight between full and empty 8¾" bobbins could give any trouble, provided the looms are properly adjusted.

CONTRIBUTOR NO. 8105 may wonder what loom adjustments have to do with the difference in weight between full and empty bobbins, and I would not be surprised if my opinion were questioned. However, there are faulty adjustments of the looms which

Kink Contest

$ $ Your Idea May Win $100 $ $

This contest ends July 15, 1950

ONE HUNDRED DOLLARS will be awarded for the most helpful short cut, kink, time-saving device, cost-cutting suggestion, or quality improvement idea submitted by July 15.

Contributions eligible for the prize must not have appeared elsewhere and must not be sent to any other publication.

All material will be paid for at regular space rates upon acceptance irrespective of the contest winner. Advise when submitting entry if participant's name may be used. Only one award will be made in each contest.

Participants are not restricted as to number of items submitted to compete in the contest. Each entry should be described in sufficient detail to make it easily understood, and where possible, glossy photographs or pencil sketches should be included. Finished drawings are not necessary.

All entries for this contest must be postmarked not later than midnight, July 15, 1950. Address: Editor "Textile Industries," 806 Peachtree Street, N. E., Atlanta 5, Georgia.

Important Factors To Consider in HIGH DRAFT SPINNING

While there are many factors to look for in modern spinning equipment, two of the most important are high drafts and quality yarn. Most mills today are fully aware of the savings to be made in card room machinery by investing in high draft spinning.

What mills must look for however as a natural complement to high drafts is a good quality yarn both as to evenness and strength.

Some systems on the market today are fully capable of achieving high drafts but this equipment cannot as a consequence produce quality yarns. Other systems are able to produce satisfactory yarns but cannot succeed in reaching the high drafts which are so necessary in today's highly competitive markets.

During the past few years H & B American Machine Company, fully aware of these factors, has devoted most of its research and development work to the improvement of high draft spinning systems *and* to the production of quality yarns with these systems. Consequently, we have recently announced to the trade, three new systems for long draft spinning. These are:

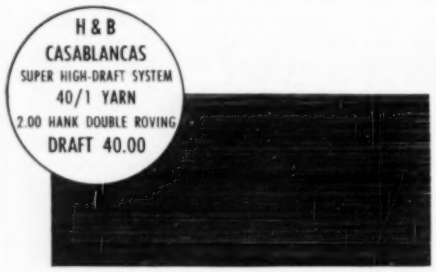
- the H & B Casablancas Super High-Draft System
- the H & B Casablancas 4-Roll High-Draft System
- the H & B Casablancas S-3 System

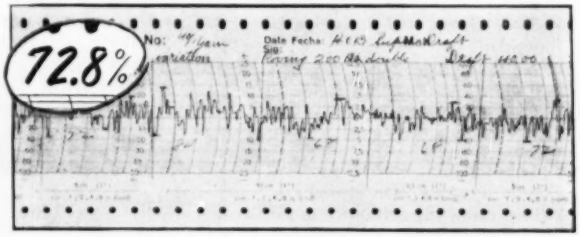
Any one of these is designed and equipped to offer not only higher drafts but quality yarns as well.

In one installation of the Super High-Draft system we are producing from 1 1/16" staple cotton 30's yarn made from .60 hank roving single in the creels. The average break factor is running in the neighborhood of 2350 to 2400 and, of course, the draft in this case is 50.

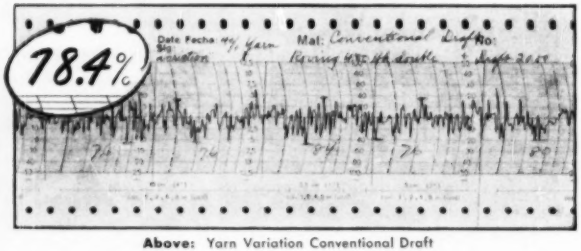
This is proof enough that H & B offers both yarn quality and high drafts in one system. Don't overlook this yarn quality factor any more than you would overlook high drafts. The H & B Casablancas High-Draft Spinning Systems are the only Systems today which offer both factors.

When considering new spinning be sure to discuss this question with one of our sales engineers.





Above: Yarn Variation H & B Casablancas Super High-Draft



Above: Yarn Variation Conventional Draft

H&B AMERICAN MACHINE CO.
FACTORY, EXECUTIVE OFFICES AND EXPORT DIVISION • PAWTUCKET, R. I., U. S. A.
Branch Offices: Atlanta, Ga. — 815 Citizens and Southern National Bank Bldg.; Charlotte, N. C. — 1201 Johnston Bldg.
Builders of MODERN TEXTILE MACHINERY

(although they have no bearing on the weight difference of the shuttle) increase the bad effect of the different shuttle weight.

One of the most common faults in loom adjustment, which will increase the trouble, is insufficient shuttle check. If the shuttle check does not do its work effectively, the shuttle box will have to be set tight to prevent the shuttle from rebounding. In this instance it is almost impossible to adjust the shuttle box so that it will not be too loose on a full bobbin and too tight on an empty bobbin. The shuttle boxes should be just tight enough to prevent shuttle rebound with the shuttle check set so that it will force the picker to meet the shuttle from 1½" to 2" from the lay end and ride this distance with the shuttle to bring it to a gradual stop. This, of course, will cause more wear on the check straps, but this is preferable to an ineffective checking of the shuttle. With an effective shuttle check the loom will tolerate a much greater variation in shuttle weight than it would otherwise.

Other faulty loom adjustments, which will increase the already bad weaving condition due to variable shuttle weight, are those that will cause a wobbly shuttle flight. If the shuttle is allowed to wobble in its flight across the loom, the wobble is much greater when the bobbin is almost empty and the shuttle is resultantly light. The increased wobbling of the shuttle, plus its decreased weight from filling exhaustion, make it rather difficult to box properly. The causes of a wobbly shuttle flight are:

1. Loom not in proper alignment.
2. Reed and box backs not square with the lay.
3. Mouth of box fronts set too close or too wide.
4. Pickers too high, too low, or not running parallel to lay end.
5. Bottom shed too high off the race board.
6. Shed timed too early or too late.
7. Too much or not enough power on the pick.
8. Pick too early or too late.

If CONTRIBUTOR No. 8105 will check his loom adjustments, I am quite certain that his trouble from variation in weight of shuttle will be overcome.

IVAR MOBERG

Comments on Reclaimed Filling

Question Briefed: *We are interested to know how other mill men handle their defective filling bobbins (soiled or tangled bobbins). Our problem is in preventing the costs of reclaiming from amounting to more than the reclaimed yarn is worth.* (CONTRIBUTOR No. 8264, *May*, 1950.)

EDITOR TEXTILE INDUSTRIES:

In answer to the question asked by CONTRIBUTOR No. 8264, we also consider it debatable as to whether filling saved is worth the cost of reclaiming. We rewind some of our bad filling including bunchless quills, some tangled yarn, and some partially used quills on which the yarn was broken while running in the loom (breaks caused by rough places or snags on the quill).

We are of the opinion that a little saving is made, and a job is provided for someone. We are using a quill winder (see photo) to backwind the defective filling from one bobbin to another. In this way we put an old quiller to use, and although we may save a little, it is doubtful that the undertaking is worthwhile. Tangled and soiled yarn is cut off the bobbins and sold as waste anyway, and it would probably be just as well to cut it all off and sell it as waste.

CONTRIBUTOR No. 8268

More on Neps in Processed Stock

Question Briefed: *What experiences have other mills had regarding the relation between the number of neps in stock run one time, as compared with stock run containing 5% reprocessed stock? Any information your readers may offer on this subject will be greatly appreciated. We are debating the issue in our plant and would like to obtain some other opinions.* (CONTRIBUTOR No. 8250, *March*, 1950.)

EDITOR TEXTILE INDUSTRIES:

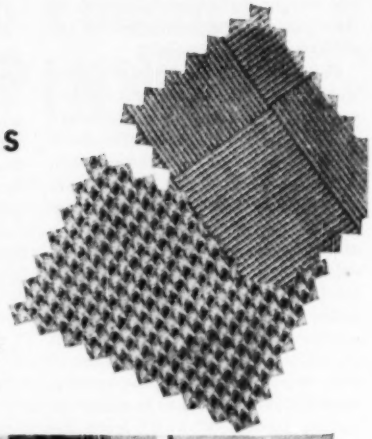
While reading the "How Other Men Manage" department in the March issue of TEXTILE INDUSTRIES, I noted with interest the article on "Neps in Reprocessed Stock," by CONTRIBUTOR No. 8250. I should like to add my observations on this subject to the discussion.

Some neps in raw cotton are due to immature fibers and boll weevil damage. If it were possible to segregate neps into different categories, probably there would be two separate types: one in the cotton before processing, and another formed during the processing. The harsh cleaning action of beaters in removing foreign matter from cotton damages the fibers, causing them to become matted and curled. This action of the beaters tends to form neps in the stock.

If beaters are not sharp, and if

IT'S A MATTER OF FACT . . .

Infinite style possibilities . . . thanks to Acetate

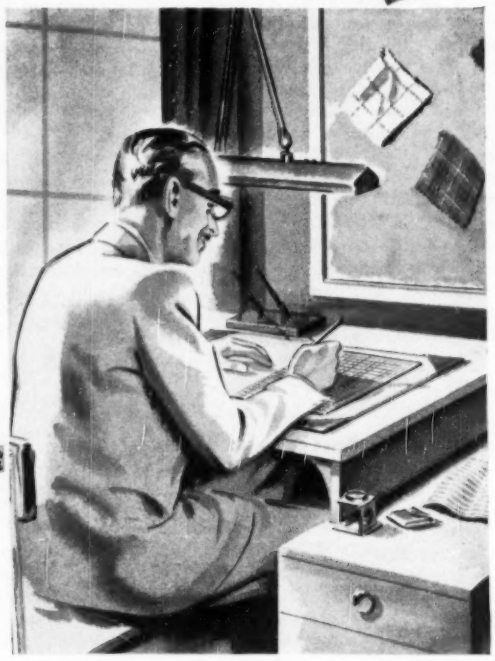


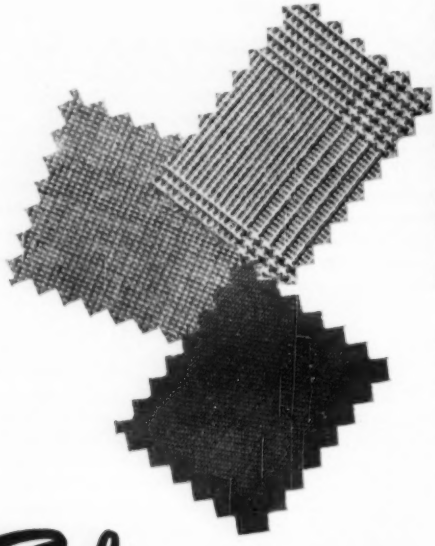
What are your customers looking for in rayon suit patterns? hairlines? . . . glen plaids? . . . herringbones? . . . shadow stripes? The skill and imagination of the fabric designer in the art of blending acetate rayon with other fibers makes possible an infinite number of styling possibilities.

Whatever patterns are getting the call, you can find them in today's rayon suitings, most of which are blends of Celanese* staple fiber.

Celanese Corporation of America,
180 Madison Avenue, New York 16.

Celanese staple fiber available in Canada from Canadian Cellulose Products, Ltd., Montreal





Celanese Acetate Rayon Gives You These Selling Extras*

- A rich, full hand—perfect comfort with less weight
- Unlimited style effects through cross dyeing
- Wrinkle-resistance for continued neatness—creases that keep their sharpness
- Moth, mold and mildew resistance
- High dimensional stability

Celanese* staple fiber of acetate rayon

*Reg. U. S. Pat. Off.

rough edges are present, the cotton will hang onto the rough edges, thereby creating a potential nep. One of the primary sources of neps I have found is in the Kirschner or carding beater. If the pins on these beaters are dull or points are bent, they will form neps. The beaters should be checked first if the stock is too neppy.

It is essential that reworkable waste be fed back into the stock as evenly as possible. Reworkable waste such as card front and back waste, and drawing waste (stock having no twist inserted) will not affect the nep count as much as roving and spinning waste which must be run through the waste machine before being put back into the stock. Waste processed in the waste machine shows a much higher percentage of neps than other types of reworkable waste. An interesting test to substantiate the foregoing statement was performed in our plant.

Nep counts were taken on sample webs from a line of cards, and the count showed approximately 40 neps per 100 square inches. Sliver from this line was removed and run through the waste machine, reprocessed into laps, and run back through the cards. The nep count on webs made from reprocessed stock showed as high as 70 neps per 100 square inches. This definitely proves that excessive processing will cause neps to form.

Reworkable waste is a problem that will always be with us. It should be held to the minimum and care taken to keep processing machinery in tip top shape. Settings on each machine should be made accurately to prevent neps from forming. Any rough place in the machine where small cotton fibers may gather, is a potential cause of neps.

Fibers damaged in the first processing may not be hurt enough to form neps, but if reprocessed for a second time, these fibers tend to split and curl or tangle. A low number of blows per inch on the sheet of cotton in picker will form less neps than a high number of blows per inch. The blows per inch should be just enough to form a well felted lap as well as remove trash and foreign matter.

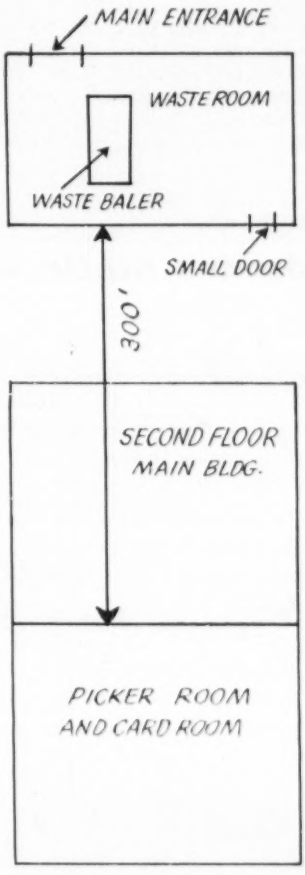
CONTRIBUTOR No. 8272

Question on Handling Waste

EDITOR TEXTILE INDUSTRIES:

We should appreciate the opinions of some of your readers as to how we may solve a transportation problem in our mill.

At present we are hauling waste by auto trucks from the card room to the waste baler which is located in a separate building. The accompanying sketch shows the relative locations of the carding department and the building in which the waste baler is located. We have thought of building a ramp from the second floor card room to the waste house, but the cost of doing this may be excessive.



Cost is of primary concern to us in that the cost of handling the waste may amount to more than the waste is worth. Further, we have thought of blowing the waste through a pipe connected to the waste room, but the cost of this type of system may be too much also. To date our ideas have not been thoroughly exploited as to costs and other details; nevertheless we are interested to know how other mill men would handle this problem.

CONTRIBUTOR No. 8263

Whip Roll Cam On Loom Cam Shaft

EDITOR TEXTILE INDUSTRIES:

Our mill was running filament rayon top beam and cotton bottom beam with one shed all rayon and the other all cotton. Some looms were weaving plain weaves on six harnesses while others were weaving a design (diamond) about one inch apart on the plain weave ground. Between the designs (diamonds) while weaving plain there were three cotton harnesses working against eleven rayon. The following conditions were giving trouble on both weaves:

1. Cloth rising and falling about ¾" at fell.
2. Both warps running badly.
3. Unevenness in cloth.
4. Let-off not working properly due to the effect that the different tensions (rayon and cotton yarn) have on the let-off.

To remedy these conditions I put the whip roll cam (of the vibrating type) on the cam shaft. With the harnesses timed to level at two inches, the cam was timed to start raising whip roll arm when

harnesses are crossing each other; rayon shed going down. The following results were obtained:

1. Cloth has only slight rise and fall at fell.
2. Both warps run better than they did before change.
3. Cleared up unevenness in the cloth.
4. Let-off works properly.

By incorporating the aforementioned change, the whip roll cam on cam shaft causes the warp to tighten every other pick.

CONTRIBUTOR No. 8239.

Identification System for Various Types and Staple Lengths of Stock

EDITOR TEXTILE INDUSTRIES:

Many mills find it advantageous to assign some code word to each type and staple cotton they are running, especially mills that are running several different staples and grades of cotton. A code system enables the employees in the opener room to keep up with the different mixes much easier and avoid costly mistakes such as mixing two different staples or grades. Some form of marking also helps to identify stock as it moves from one department to another through the mill.

It is best to assign some group of items such as minerals or trees to the different stocks. The words used must be short and easy to pronounce. One mill uses the names of minerals; each type and staple length that goes into a mix is given a word to identify the mix, and all records pertaining to this mix are carried in the code. For example, Middling 15/16" cotton may be called "gold." And Middling Fair 1 1/16" may be called "silver cotton."

Another system may be used, wherein a symbol is assigned to the type cotton and the staple stated as red 15/16". If this system is followed, metal plates with each code stencilled on them should be made up. A wire can be strung across the opener room for the plates to be hung up over the mix as it is opened up.

If illiterate employees are employed in the opener room, it is a good idea to assign a code color to each type of mix and have plates stencilled with the name of the color in the color of ink to correspond with the color assigned to the mix. If this system is followed, there can be no costly mix-ups in the opener room that could cost money even though some employees cannot read.

CONTRIBUTOR No. 8270

Steam Eliminates Static on Peraltas

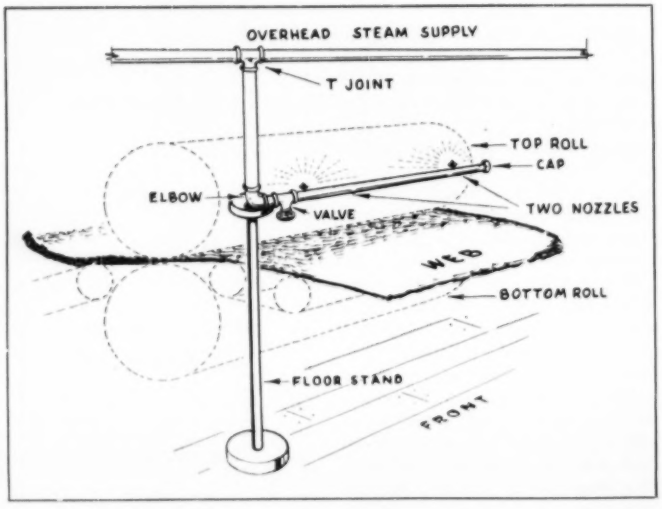
EDITOR TEXTILE INDUSTRIES:

Webs charged with static electricity interfered with production at the Peralta roll section of the wool cards in our mill.

To neutralize static and eliminate its incident troubles, cards were equipped with steam pipes and jets directed at the Peralta crushers as shown in the accompanying sketch. Located at the delivery end of the Peraltas, the jets are operated by card tenders when atmospheric conditions tend to create static.

We have also supplemented the equipment with electric neutralizers, and replaced wooden aprons with steel aprons. These measures remedied an otherwise troublesome static situation.

CONTRIBUTOR No. 8262



Though Christmas has but one season, "Santa's helpers" must work months ahead to fulfill the children's dreams.
THE ISELIN DIARY, 1885

THE BETTMANN ARCHIVE

Timing in business

Like "Santa's helpers," most manufacturers must take a long lead on a selling season. Time must elapse . . . while inventories are in process of manufacture before finished goods can be turned into receivables, receivables into cash. Time brings payrolls, taxes, bills to settle . . . new opportunities to be grasped. And with time come economic ups and downs that introduce an element of uncertainty into credits and collections . . . Since 1808, Iselin's Factoring service has provided the necessary financial flexibility, improved the timing of many business operations, and eliminated much of the uncertainty. Send for booklet on our Factoring service to industry.

William Iselin & Co., Inc.

357 Fourth Avenue, New York 10, N. Y.
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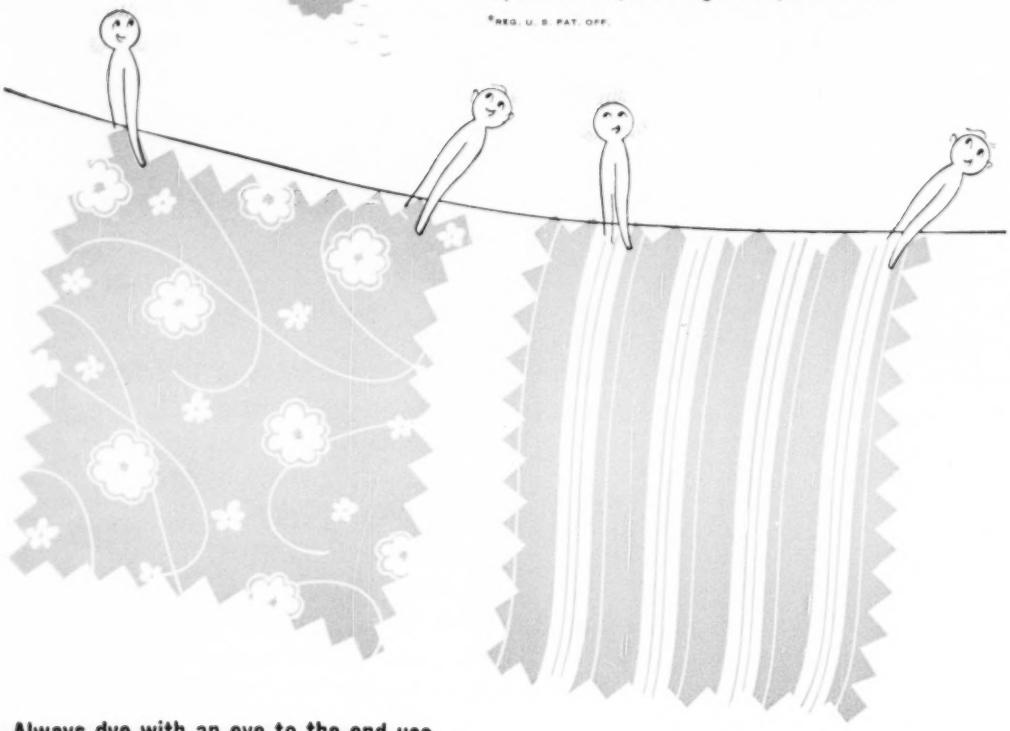
DU PONT VAT COLOR pastes for printing cotton and rayon offer the best all-round fastness obtainable. These colors resist laundering and sunlight . . . help assure customer satisfaction.

Why not investigate Du Pont PONSOL* and LEUCOSOL* colors (anthraquinone-type dyes) and SULFANTHRENE* colors (thioindigoid-type dyes). Our Technical Staff will be glad to work with you.

E. I. du Pont de Nemours & Co. (Inc.),
Dyestuffs Div., Wilmington 98, Delaware.

*REG. U. S. PAT. OFF.



Always dye with an eye to the end use

Du Pont Dyestuffs

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BETTER THINGS FOR BETTER LIVING
. . . *THROUGH CHEMISTRY*

Comments on Editorial "How Far Must We Go"

(*Continued from page 79*)

policies of the federal government made it impossible for a man to hope to succeed in the old-fashioned way, and that the best thing for a young college man to do was to look for something mediocre, but safe.

Perhaps this attitude developed in the home, or perhaps it was developed by the attitude of teachers. Maybe both of these had influenced the college graduates.

There has been a very widespread feeling that our teachers, generally, have been entirely too socialistic in their attitudes for a number of years. Maybe those attitudes are now bearing a bitter fruit.

In asking how far must the textile industry go in competition for the current crop of college graduates, there is some question as to whether it should go anywhere at all. Why should an employer go out of his way to attract the type of man that he shouldn't want? Of course, in the great corporations which hire such vast numbers of persons that they can afford to employ on a percentage basis, and then sort out the sheep and the goats, it may be a paying proposition to go to considerable lengths to attract these young collegians, some of whom may be bright.

The late Mr. Crane, who founded the great plumbing supply house, was said to have always held that a college education was such a grievous handicap to success that he would not hire college graduates in his business. Maybe Mr. Crane had been approached by some ambitious lad like the one mentioned in your editorial; that is, one ambitious to fasten himself to a payroll rather than to contribute anything to the welfare of the organization that he joined.

On the other hand, the American Telephone & Telegraph Company, which is the world's largest corporation outside of the Russian government, was one of the first of these big concerns to start employing college graduates as a settled policy.

The A. T. & T. from time to time has published national advertisements showing the pictures and thumbnail histories of the presidents of its associated companies. The first time this group of presidents was presented to the public, practically every one of them was without the benefit of a college education, and as well as memory serves, only one had made as much as $50.00 a month in his first job with the telephone company. In a few years, this roster of telephone company presidents will probably show nothing but college graduates. The Bell Telephone System might employ a thousand or more college graduates every year, and out of this number they can sift the wheat from the chaff and fit the men of different capabilities into jobs suiting those capabilities. Other big corporations can follow the same pattern.

The textile industry, however, is in the main composed of relatively small units, which are not looking for more than one man at a time, and perhaps looking for him only once every several years. Is not such a concern better off to try to find a go-getter who is looking for opportunity rather than security, than to offer tempting rewards to some youngster who may prove to be nothing but a barnacle on the payroll.

A man whose sole interest in his job seems to be, "How much do I get now, and how soon will I get five thousand dollars a year, and how much will you guarantee me when I am 65 years old," is thinking entirely of himself, while an employer wants a man who will think a good part of the time about his job.

It is related that one of the famous bankers of a generation ago was, as a promising youngster, offered a job by the elder J. P. Morgan, and he took it without one word of discussion about salary, although this young man was giving up a very lucrative proposition to go with Morgan. It is also related that the late Walter P. Chrysler quit a $25,000 a year job to take one at $10,000 a year, and a future. Chrysler got the future; the chap who is only looking for security would have stuck with the $25,000 job.

A small firm, which only needs one man occasionally, needs a good man, and it is probably better to wait for a good man than to make some special effort to hire a poor one.

The young man mentioned in your editorial is like the chap who applied for work and asked what the salary would be. The prospective employer said, "I will pay you what you are worth," and the would-be employee remarked, "I couldn't possibly live on that." He had to find somebody who would pay him more than he was worth.

It isn't enough that a man be bright, or that he have a thin veneer of technical training. He must have within him the seeds of success in order to be a valuable member of a business organization. One of these seeds is the willingness to earn what you get and to be satisfied with getting what you can earn. The man whose principal interest is in how much he can mooch off of his employer is no shining asset to the business.

The textile industry is one of the last strongholds of individual enterprise in the United States. As such, it should offer an appeal to the young man who wants to get ahead under his own steam and some day rise to the management, or perhaps the ownership of the company with which he is associated, or even better, a company of his own. Should the textile industry bestir itself to attract the type of man who is content to develop into a six or eight-thousand-dollar-a-year man in a great pool of others like himself?

Maybe the magazine survey indicated that there are only just about enough go-getters coming out of the colleges to provide presidents for the big corporations. Let's hope not.

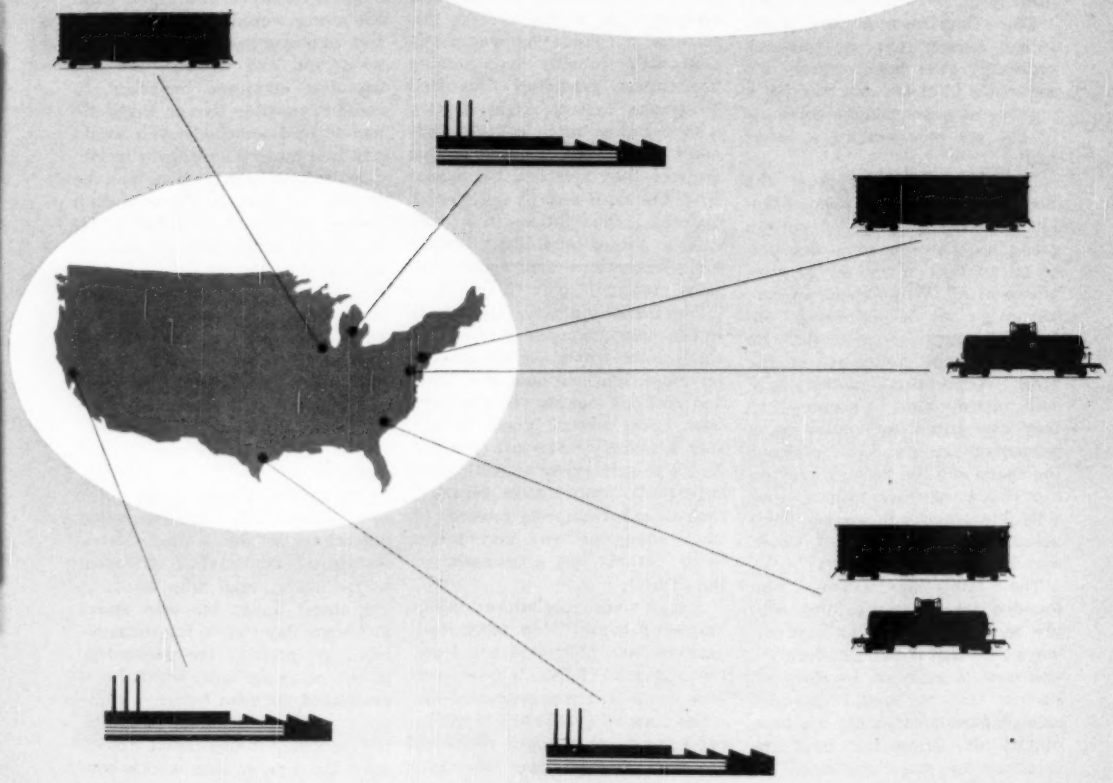
CONTRIBUTOR No. 8288

Dow Caustic Soda

serves industry

. . . with unequalled distributing facilities

1. Three producing plants—in Michigan, Texas and California.
2. Caustic Soda Solution bulk tank terminal distributing facilities—Carteret, N. J. and Charleston, S. C.
3. Caustic Soda Solid, Flake and Ground Flake terminal distributing facilities—Chicago, Ill., Charleston, S. C., and Port Newark, N. J.



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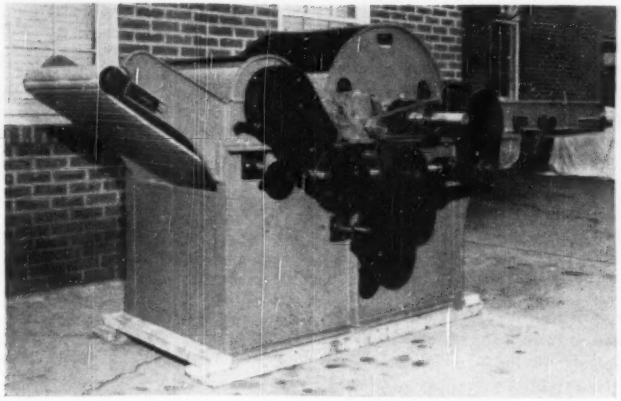
INDISPENSABLE TO INDUSTRY AND AGRICULTURE

NEW EQUIPMENT
AND MATERIALS



Cylinder Waste Machine (Kirkman & Dixon).

Single Cylinder Waste Machine

Double opening and cleaning on one cylinder is one of the outstanding features claimed for the recently announced K & D Single Cylinder Waste Machine.

The machine employs a set of double feed rolls for the first feed into the cylinder; a cut-off 12 inches from the rolls drops the stock onto a screen, carrying it to a set of single feed rolls and into the cylinder again. This step in the process is said to be equivalent to running the stock through a second cylinder. Another cut-off then delivers the stock to a second screen and onto the delivery apron, carrying it to a receptacle.

Two of the machines may be used in tandem.

Other advantages cited: measures only 11′ 6″ when using 5-foot apron; weighs approximately 2500 pounds; uses 7½ hp motor; cylinder, feed rollers, side shafting, and gearing are standard equipment; does not damage fiber; equally satisfactory on cotton and rayon.

Kirkman & Dixon Machine Shop and Foundry, Greenwood, S. C.

For additional data, request item F-110, using business reply card on page 220.

Machine for Laboratory Dyeings

Recently made available in this country is the Marney dyeing machine for making laboratory dyeings. Thermostatic control of the heating bath combined with scientific mechanical agitation, give conditions which are readily reproducible, according to the manufacturer, and make possible the simultaneous dyeing of twelve different samples, without occupying the time of an operator except for changing samples and making observations.

Samples are carried by stainless steel rods from which hooks, specially designed for holding samples, are suspended. Rods receive continuous vertical reciprocating motion by contact with a camshaft in base of machine. Any desired number of agitators can be set in motion as and when required.

All parts which might come in contact with water or dye liquor are made of stainless steel.

Imperial Chemical Industries (New York) Limited, 521 Fifth Ave., New York 17, N. Y.

For additional data, request item F-112, using business reply card on page 220.

Pigment Discharge Colors Give Fast, Bright Shades

Introduction of a new line of pigment colors developed specifically for discharge printing is announced. Known as Aridye Discharge Colors, these products permit the production of bright shades comparable with "silk" colors in their brilliancy and clarity.

Patterns printed with the colors have good fastness to washing, drycleaning, perspiration, and light, it is claimed. The colors are employed for printing rayon crepes, viscose rayon and Bemberg rayon sheers, spun rayons, and other fabrics. They provide fine, sharp marks and smooth prints with no impairment of hand.

Colors now available include two exceptionally brilliant blues, a bright green, a vivid yellow, a bluish red, and a white which imparts additional brightness and opacity in printing light shades. These colors can be combined with one another in any proportions to produce a wide range of compound shades, including aquas, royals, turquoise, and chartreuse. In addition, they can be printed in conjunction with vat dyes and pigment whites to achieve color combinations which previously have been unobtainable.

Interchemical Corp., Textile Colors Div., Fair Lawn, N. J.

For additional data, request item F-109, using business reply card on page 220.

Flexible Tubing Has Many Uses

A newly improved type of light weight, flexible tubing is said to have many textile applications. For example: conveying cotton, wool, and synthetic fibers; dye vat ventilation; spot heating—cooling; vacuum cleaning in the card room. Named "Spiratube," it is reported to be highly wear and heat resistant, portable, retractable, and easy to assemble. According to the manufacturer, it is unusually resistant to rupture or collapse under pressure or vacuum. Available in a variety of standard

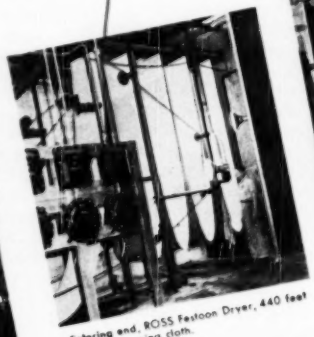
MILL MODERNIZATION

calls for the modern air systems

In practically all of the major new plant, expansion and modernization projects during the past few years, the more advanced types of AIR systems have been installed. To insure maximum production efficiency and operating economies, ROSS Air Systems are being successfully employed to effectively confine and remove vapors from processing equipment and speed drying, to prevent spoilage of goods from condensation and drip from ceilings and walls, to eliminate fog and provide comfort cooling for improved working conditions—to heat, cool, dry and ventilate by means of controlled air.

These modern ROSS Air Systems are not merely a grouping of units but complete, carefully engineered systems designed to form an integral part of the plant's processing equipment. They embody, as required, panel constructed hoods for dye jigs, dry cans, etc., vapor absorption and exhaust apparatus, air make-up, roof heating and ventilating ducts, waste heat recovery apparatus, cooling systems for aisles, motors, generators, etc. and room air conditioning. Long experience with industrial air handling problems is reflected in the advanced design and construction of ROSS Air Systems for textile plants. Let us survey your requirements. Contact our office nearest to you.

ROSS Transite Hood over Dye Jigs. Note ducts and outlets for comfort cooling in operating aisles.



Entering end, ROSS Festoon Dryer, 440 feet long, for awning cloth.

ROSS Drying and Fusing Oven, 150 feet long, for organisol and pyroxylin—leaving end.

ROSS Air System duct distributing heated air over ceiling.

ROSS SYSTEMS FOR FINISHING PLANTS

HEATING • VENTILATING • COOLING • DRYING

J. O. ROSS ENGINEERING

CORPORATION

MANUFACTURERS OF AIR PROCESSING SYSTEMS

350 MADISON AVENUE NEW YORK 17, N. Y.

201 N. Wells Street, CHICAGO-6 • 79 Milk Street, BOSTON-9 • 9225 Grand River Avenue, DETROIT-4 • 600 St. Paul Avenue, LOS ANGELES-14

ROSS ENGINEERING OF CANADA, LIMITED, MONTREAL, CANADA • CARRIER-ROSS ENGINEERING COMPANY, LIMITED, LONDON, ENGLAND

plys and materials from 3" to 30" ID. It is described as consisting of a rust-proof, spring-steel helical core, covered inside and out by double-seam stitched cotton duck, coated with neoprene.

Flexible Tubing Corp., Branford, Conn. (F-139)

New Automatic Overhead Loom Cleaner

A new automatic overhead loom cleaner (blowing-off) operates on the basic principles of overhead cleaning for spinning frames and ceilings, and is similar in operation to the underframe cleaner for spinning frames.

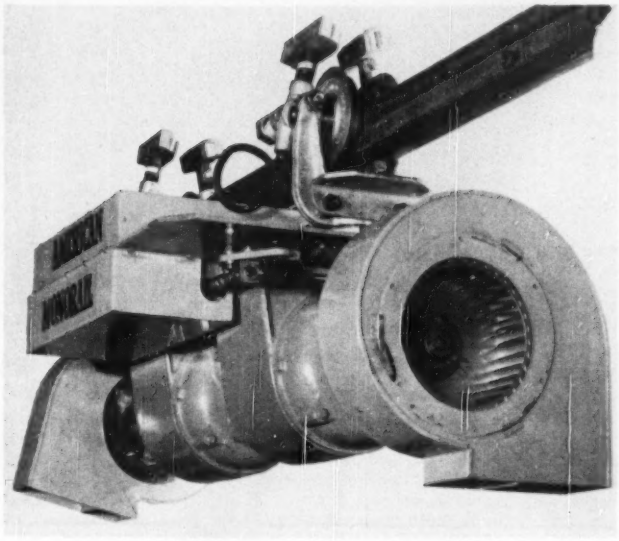
The overhead cleaner, which travels on a single monorail track, uses high velocity concentrated jets or streams of air directed on critical areas of the loom. The jets are repositioned automatically on each round so as to cover the entire loom in time.

The twin-motor system is also equipped with a ceiling fan so that ceilings, lights, ventilation ducts, etc., may be cleaned at the same time the loom is cleaned.

This new device is said to be effective for cleaning looms weaving cotton or rayon.

The American MonoRail Co., 13107 Athens Ave., Cleveland, Ohio.

For additional data, request item F-101, using business reply card on page 220.

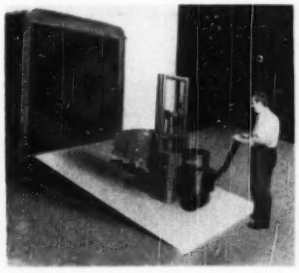


Overhead Loom Cleaner (American MonoRail).

Adjustable Loading Platform

A device called the "Make-It-Evener" performs the very useful service of leveling a loading platform or dock with the height of an automobile truck. Built in the loading platform like a hydraulic elevator, the movable platform is usually about eight feet long by six feet wide. Inside end of platform is held in position by pivot, while outer end is raised or lowered by hydraulic ram operated by electric-oil, air-oil, water or by hand. Capacity to suit requirements up to 20,000 pounds.

"Make-It-Evener" (Revolvator).



Revolvator Co., North Bergen, N. J. (F-138)

Continuous Vat Dyeing with Molten Metal

Molten metal is employed in a new and novel process recently developed for the continuous vat dyeing of cloth. The metal serves as the medium in which fixation of the color occurs.

The process, described by G. L. Boardman of Standfast Dyers and Printers, Ltd., Lancaster, England, at a recent meeting of the Manchester Section of the Society of Dyers and Colourists, utilizes a device which has become known as "The Standfast Metal Machine."

The cloth is impregnated with dye liquor and passed through the molten metal where dyeing is completed.

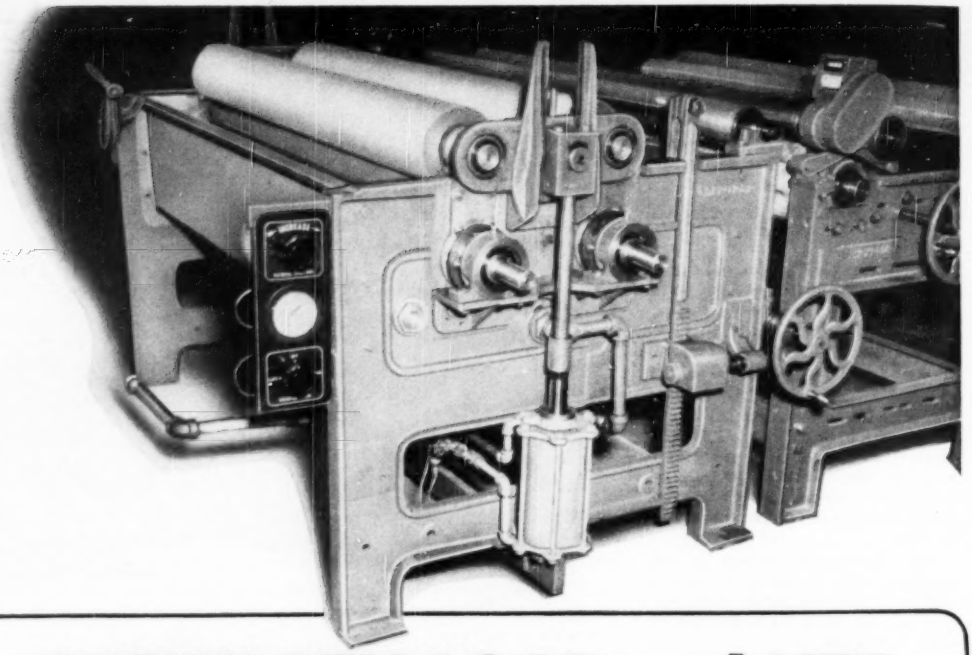
The unit consists of two parts—the dyeing machine and a conventional soaping range.

The dyeing machine consists of an iron vessel which is filled with metal of the fusible alloy type having a melting point of approximately 71 C and maintained in the molten state. It is 60 inches wide, giving a large U of metal five feet wide, five feet deep, and one inch thick.

The cloth is passed in open width down one arm of the U-tube and up the other, giving a total passage through the metal of a little over 10 feet. At certain intervals down both legs of the machine and on both sides of the cloth, steam heating pipes are arranged so that an even temperature is maintained throughout the molten metal.

At the surface of the metal on the entry side, there is a bottomless stainless steel dyebath extending the full width of the metal slot, this being 60 inches long and less than one inch wide. The height of the dyebath is such that there is almost eight inches above the surface of the metal and two inches below. When the bath is filled, the liquor floats on the surface of the metal which acts as the bottom of the dyebath.

During dyeing the cloth in continuous length is passed through the dye liquor directly into the molten metal. In the dye bath it becomes thoroughly saturated with dye liquor and all excess is squeezed out by the pressure of the metal. During its passage through the molten metal (which is maintained at a temperature of 95-100 C), dyeing takes place, and on leaving the machine the exhausted dye liquor is removed in an-



PNEUMATIC LOAD and LIFT
puts the RIGHT pressure on Squeeze Rolls

Size penetration is accurate and easily adjusted with the WPF & M Pneumatic Load and Lift device.

The pressure control gauge and knob on the control panel can be set to any predetermined load without guess work. Change over from light to heavy sets is accomplished in seconds, without switching squeeze rolls, by increasing or decreasing pressure as required.

The WPF & M Pneumatic Lift and Load device can be installed on your present equipment without costly alterations.

Ball bearing journals are provided for squeeze roll journals for smooth, long-lasting operation.

You can reduce change-over time on your slashing equipment, eliminate the back-breaking drudgery of lifting squeeze rolls and obtain accurate size penetration time after time with the Pneumatic Load and Lift equipment.

We'll be glad to make a survey of your requirements if you desire.

WEST POINT FOUNDRY & MACHINE CO.
WEST POINT, GEORGIA
Textile Machines . . . To Solve Your Problems

other bath very similar to the dye bath, but this time containing Glauber's salt solution as wash liquor.

This completes the dyeing, and the cloth passes into an open width soaper where it is oxidized and washed and given a thorough soaping and final successive washings before being nipped and plated down on wagons for drying.

The molten metal plays a very important part in the process. Primary functions are to produce a uniform squeezing on the cloth so that it can modify the surface, and the complete exclusion of air during dyeing. Increased penetration results and full fixation and fastness are obtained in a matter of a few seconds.

The rate of dye transfer is one of the most important factors determining the speed at which the machine can be run, and while it varies slightly with different colors and depth of shade, it is in all cases only a few seconds.

The maximum speed achieved is 120 yards per minute, and up to the present time over six million yards of cloth have been dyed by this process. One machine has produced as much as 45,000 yards in one eleven-hour day.

The shade is uniform throughout and there is no darkening of the selvages. Since the cloth is normally dyed at one run, there is no batch-to-batch difference.

Fire Retardant for Cellulose Fabrics

A new chemical composition for imparting fire retardant properties to all types of cellulose fabrics has been developed.

Fabrics treated with the composition, called Monsanto Fire Retardant B, satisfactorily fulfill flame resistant requirements of Army Quartermaster Specifications JQD-242, Federal Specifications KKL-136B, National Bureau of Standards Commercial Standard CS-129-46, and the Pyrolysis test, according to the manufacturer.

Special advantages claimed include: Excellent flame resistance; minimum afterglow; low pyrolytic ratio; favorable pH values; only slight reduction in tensile strength; outstanding non-yellowing and ageing properties; unusually soft, dry, non-dusting finish; permanent to dry cleaning.

Monsanto Chemical Co., Phosphate Division, St. Louis 4, Mo.

For additional data, request item F-106, using business reply card on page 220.

OMISSION

The description of the Josephy woolen card as published on page 253 of the April 1950 issue of TEXTILE INDUSTRIES indicated the name of the machinery manufacturer, G. Josephy's Erben, but the address of the firm was not included. The redesigned card is being produced at a new plant in Linz, Austria. U. S. agent: Matthes, Inc., 33 West 42nd St., New York 18, N. Y.

Level Indicators with Illuminated Dials

Operating from any 3 to 15 lb pneumatic transmitter or direct from valve loading pressure, a sensitive and accurate reading of liquid levels can be transmitted any distance to a new direct reading level indicator receiver. Changes in levels from any source, from any remote point, are visually reproduced on a graduated illuminated dial scale on the face of the instrument. A solid red band on the translucent dial faithfully depicts every dip and rise in levels.

Panalarm Products Division, Panellit, Inc., 7218 N. Clark St., Chicago, 26, Ill. (F-145)

Anti-Static Agent

For preventing the development of static electricity in nylon, acetate, wool, etc., fabrics, a new product, Anti-Static N-30, is being marketed.

The anti-static agent is padded on and dried into the fabric or yarn at concentrations ranging from .5% to 2% by weight.

Atlantic Chemical Co., Inc., Centredale, R. I.

For additional data, request item F-111, using business reply card on page 220.

Improved Continuous Crusher

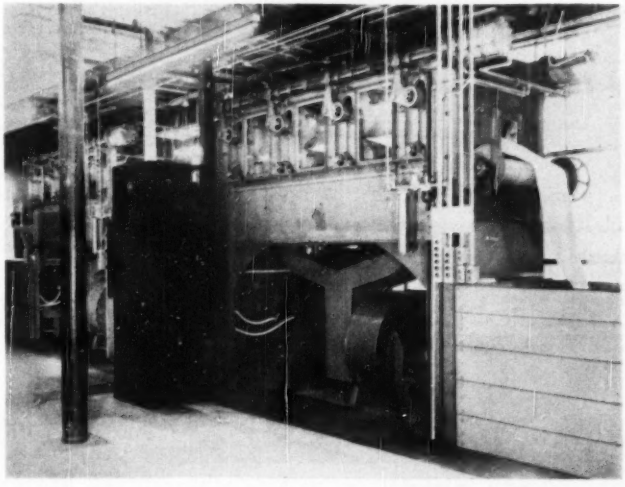
The development of a completely redesigned and improved continuous crusher for dusting or crushing woolens has been announced.

The machine consists of two units, set up in tandem, each equipped with four sets of metal rolls, the bottom ones being knurled. Top roll pressure is applied through coil springs, controlled by pneumatic cylinders. This is said to assure ease of operation and uniform pressure from roll to roll.

Extremely rigid construction and the arrangement of moving parts practically eliminate vibration.

Both units are enclosed and equipped with large capacity fans lo-

Continuous Crusher (Riggs & Lombard), a completely redesigned crusher for dusting or crushing woolens. The machine consists of two units in tandem, each equipped with four sets of metal rolls, the bottom ones being knurled.



FIBERGLAS*

Marquisette performance

a national textile success IN ONE YEAR!

product: New Fiberglas marquisettes—the first consumer textile woven of glass yarns! As a result of research and refinement, the valuable properties in Fiberglas yarns now serve the housewife!

Weavers and curtain manufacturers, with the cooperation of Owens-Corning Fiberglas Corporation, perfected the new marquisettes after months of effort.

characteristics: Fabric has excellent hand and soft drape! Coronizing* has produced a fabric that can be washed and rehung immediately—that needs no ironing, stretching or starching! It cannot shrink or distort—mildew or rot—and, of course, *won't burn!*

distribution: Fiberglas curtains were introduced at the Chicago Market Openings in January 1949. Retailers bought—and re-ordered..."wash and hang" demonstrations were conducted in curtain departments in many leading stores!

result: **Sell-out after sell-out! One year later more than 600 top stores are stocking and promoting Fiberglas curtains from coast to coast!**

Watch for the next Fiberglas performance fabric to be announced soon!

TEXTILE PRODUCERS ATTENTION!

The personnel and facilities of the extensive Owens-Corning Fiberglas Textile Laboratories are at your service. Call on us to help you utilize the valuable properties in Fiberglas yarns to solve current textile problems or add sales punch to new fabrics! Phone or write . . .

HERE ARE A FEW OF THE LEADING STORES CONDUCTING SUCCESSFUL "WASH & HANG" DEMONSTRATIONS IN THEIR CURTAIN DEPARTMENTS

Abraham & Straus · L. S. Ayres & Co. · Barker Brothers · Wm. H. Block Co. · Bloomingdale's Carson, Pirie Scott & Co. · Dayton Co. · Emporium of St. Paul · Filene's · Foley Brothers G. Fox · Gimbel Bros., Philadelphia · Gladding's · Halliburton's · The Hecht Company · J. L. Hudson Hutzler Brothers · Jordan Marsh · Kaufmann's · F. & R. Lazarus · The May Co · McCreery's · Meier & Frank Company · Milwaukee Boston Store · Rich's · Rike-Kumler Co. · John Shillito Co · Sibley, Lindsay & Curr Stewart Dry Goods · Stix, Baer & Fuller · Strawbridge & Clothier · William Taylor & Sons

WOVEN OF OWENS-CORNING FIBERGLAS *Yarns*

*Fiberglas and Coronize are trade-marks of Owens-Corning Fiberglas Corporation which produces Fiberglas yarns and Coronizes marquisettes woven of such yarn, but does not weave or manufacture finished curtains.

OWENS-CORNING FIBERGLAS CORPORATION · TEXTILE PRODUCTS DIVISION · 16 EAST 56TH STREET, NEW YORK 22, N. Y.

cated directly beneath to insure complete exhaustion of dust. At all times the machine operator is able to see inside through easily removable Lucite panels.

Each unit is driven by a 20 hp motor through a roller chain and sprockets. By means of a single electrical control, the forward and reverse cycles can be adjusted for the desired production speed or to synchronize with the speed of a carbonizing range.

Model CCT-4 (the dual-unit continuous crusher) and Model CCS-4 (a single unit) can be installed in connection with existing carbonizing ranges, as well as new ranges.

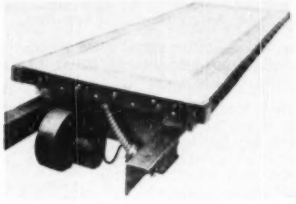
Riggs & Lombard, Inc., Lowell, Mass.

For additional data request item F-104, using business reply card on page 220.

Radiant Heater Cures Nylon Fabrics

A recently developed radiant heater for curing nylon fabrics is designated the Fibre Glass Super-Heater. It develops heat uniformly over every square inch of the heater surface, according to the manufacturer, and has a temperature range of from 120 to 700 F.

Tricot fabrics can be set with zero-zero shrinkage, curl is eliminated, and the setting is completely uniform, it is claimed. Due to the black radiant heat developed by the heater, the setting of white goods produces no discoloring or "yellowing." The fabric may be dyed before it is set, since the black heat has no visible effect on colors. This last factor shortens the finishing cycle materially.



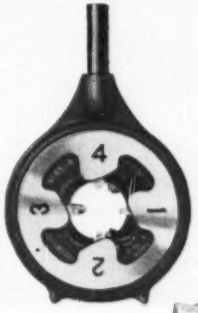
Fibre Glass Super-Heater (Sill Industries).

The heat produced by the heating panels is completely radiant and the wave length is so akin to that of the nylon fiber that it completely

NOW New Streamlined RIDGID 65R Die Stock that WON'T JAM

while threading with power drive or by hand

New *JAM-PROOF* drive plate automatically kicks out driving ratchet pawl when standard length thread is cut.... You don't have to watch it—lead screw can't jam on workholder.



Right Here is the simple foolproof mechanism that makes 65R automatically *JAM-PROOF*.

You can convert your present 65R to new JAM-PROOF type — buy new drive plate, put in place of old plate.

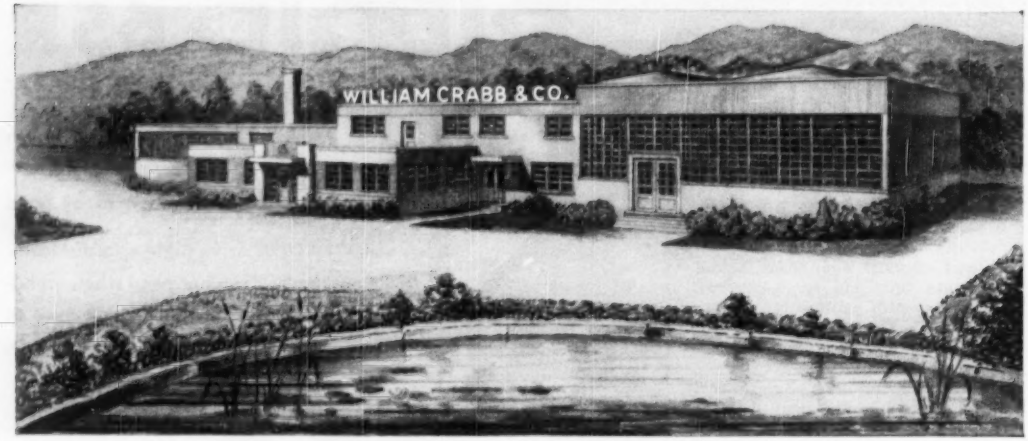
All other RIDGID 65R features remain the same

Perfect threads on 1" to 2" pipe with 1 set of high-speed steel dies—sets to pipe size in 10 seconds—mistake-proof self-centering workholder sets instantly—and now it's *JAM-PROOF*.

Buy new JAM-PROOF RIDGID 65R at your supply house

RIDGID
WORK-SAVER PIPE TOOLS
THE RIDGE TOOL CO. • ELYRIA, OHIO

For Better Service to the Textile Industry



OUR NEW PLANT

Near Asheville, N. C.

(After 80 Years in Newark, N. J.)

You are Cordially Invited...

J. C. Bennett, President of William Crabb & Company, Newark, New Jersey, manufacturers of pins, lags, aprons and cylinders announces the opening of a new plant located between Swannanoa and Black Mountain, North Carolina, on Highway No. 70.

The Company will occupy a new building designed by Six Associates, Architects and Engineers, now completed. It is anticipated that production in the new plant will start about June 1st. Mr. Bennett announces that the plant represents an investment of $350,000 and will employ approximately 100 workers. The building is of fire-proof construction with all the latest facilities. It is located on the Southern Railway's Asheville-Salisbury line.

The William Crabb Company has been in operation since 1870 in Newark, New Jersey, and this move was decided upon because of the company's increased business and to better serve the textile industry.

A modern heat-treating plant of three new furnaces capable of heat-treating and passivating stainless steel of the 400 series, in addition to the regular line of high-carbon steels with both salt and oil hardening facilities, has been installed. Four Leeds & Northrup Micromax-Controlled Homos have been installed for tempering. Also, a complete new machine shop.

The recent purchase of an apron business will complete our line. We are now testing a new shredding and bale breaking machine.

In addition to Mr. Bennett, those moving to the new headquarters are Marian A. Nobst, Secretary and Treasurer, John Daly of Asheville will be General Superintendent, John C. Bennett, Jr., Assistant Superintendent, and A. P. Sommer, Sales Manager.

William Crabb & Co.

P. O. Box 95

BLACK MOUNTAIN

NORTH CAROLINA

"sets" or cures the fiber although the heat is applied to one side only.

The usual procedure is to mount several units in series, inverted, over a tenter frame. On pin tenters the heater surface is about 2" from the cloth line. On clip tenters the heater surface is about 4½" from the cloth line. The number of units employed is determined by the speed of operation desired. Four panels in line yield a speed of approximately 25 yards per minute.

With a temperature range from up to 700 F, these units are fully and automatically controlled so that the setting temperature can be varied to suit different weights of cloth. Some mills operate the heaters consistently at top temperature and vary the speed of the operation to suit the time-temperature relationship.

In all operations, the heaters are set up to be automatically retracted from the cloth when the tenter stops, to prevent scorching or fusing the fabric. When the machine starts, the heaters move into place and the setting operation continues.

It is said that even warp-knit nets and marquisettes can be controlled in fill and warp shrinkage to yield the width desired.

Sill Industries, 51 Madison Ave., New York 10, N. Y.

For additional data, request item F-107, using business reply card on page 220.

Stainless Steel Cloth Truck

Stainless steel cloth trucks for general mill use are now being made in various sizes, with the 36 x 72 x 28" unit proving most popular. Rigid sides and ends provide the needed strength with a minimum of weight.

The solid type bottom is high in the center and slopes toward both sides. Drainage at the sides insures a minimum amount of moisture getting onto the wheels, according to the manufacturer.

Rod type handles are at either end, as well as bottom rubber bumper strips for adequate collision protection. The under-carriage, which is entirely enclosed within the solid stainless steel bottom, is a galvanized iron framework. It is equipped with two large rubber tread wheels with roller bearing and stainless steel guards. Swivel-type end wheels have hard rubber treads and are equipped with ball bearings.

Riggs & Lombard, Inc., Lowell, Mass.

For additional data, request item F-108, using business reply card on page 220.

Light-Directing Glass Block

A light-directing glass block now available has been designed to transmit more daylight under conditions usually considered adverse. Designated Light-Directing Glass Block No. 363, this new product is said to accept more daylight and diffuse it more evenly to the front and rear walls of a room. Less surface glare when viewed from below normal eye level; shades or blinds over glass block not required. Improvement is accomplished by addition of "azimuth-correcting" ribs on outside face of block, according to manufacturer.

For use below normal eye level, a companion block, designated No. 365,

NON-FLUID OIL
TRADE MARK REGISTERED

Stops Cloth Spoilage in the Weave Room

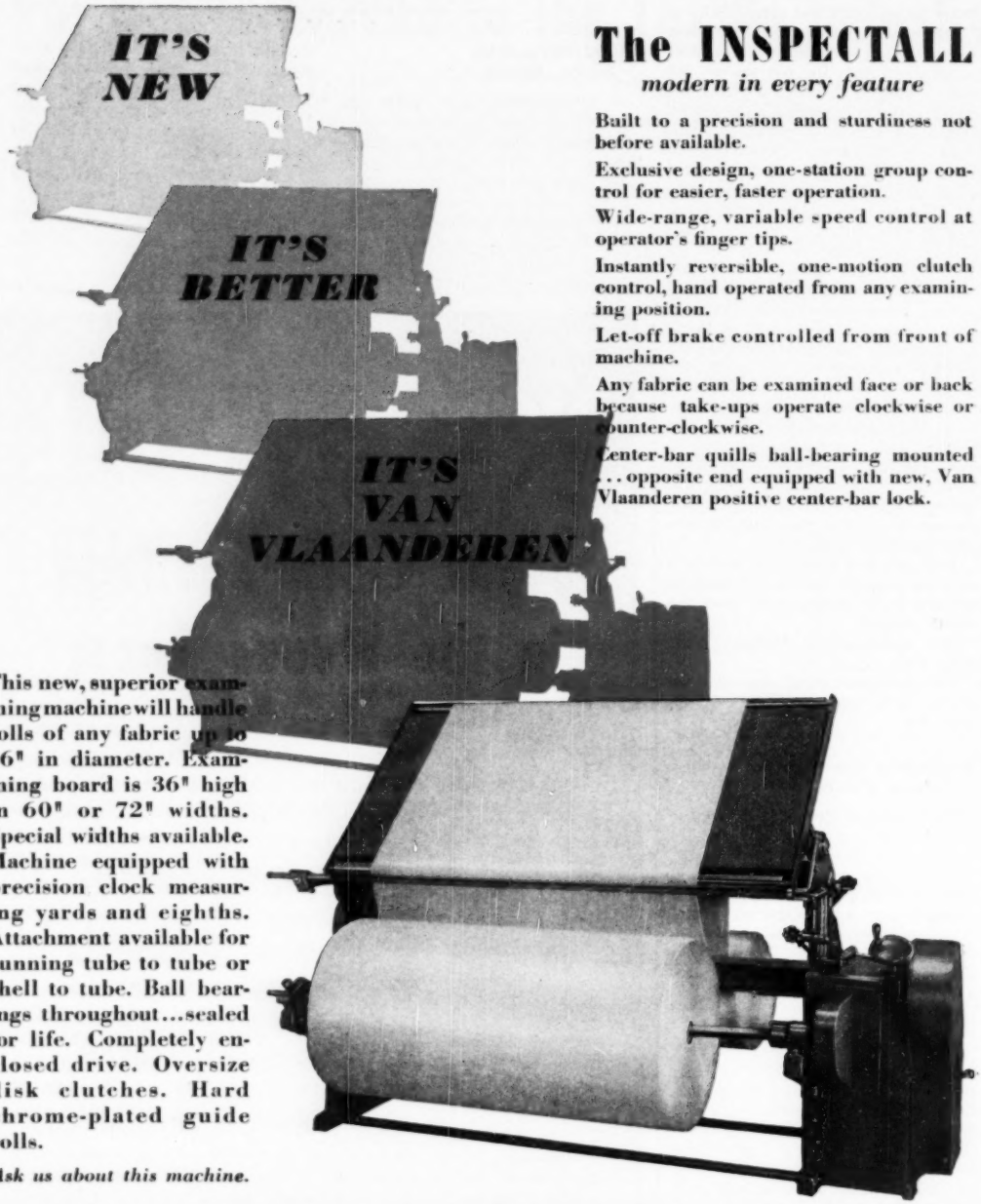
Losses from oil spot "seconds", if unchecked, can cut very deeply into profits. That's why 7 out of every 10 mills have changed from ordinary oil to NON-FLUID OIL . . . the drip-less, waste-less lubricant that stays in bearings and off goods.

NON-FLUID OIL saves its own cost many times over by checking oil damage. And it offers still further savings by outlasting oil 3 to 5 times, thereby reducing lubricant and application costs.

We are prepared to furnish mills with skilled engineering service. Write for Bulletin T 13 TI and free testing sample of "A-400000" grade of NON-FLUID OIL.

NEW YORK & NEW JERSEY LUBRICANT CO.
292 MADISON AVENUE, NEW YORK 17, NEW YORK—Works: Newark, N. J.
Southern District Manager, Falls L. Thomason, Charlotte, N. C.
WAREHOUSES: Atlanta, Ga. • Birmingham, Ala. • Charlotte, N. C. • Columbus, Ga. • Greensboro, N. C. • Greenville, S. C. • Chicago, Ill. • Detroit, Mich. • Providence, R. I. • St. Louis, Mo.

NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture. So-called grease imitations of NON-FLUID OIL often prove dangerous and costly to use.



The INSPECTALL

modern in every feature

Built to a precision and sturdiness not before available.

Exclusive design, one-station group control for easier, faster operation.

Wide-range, variable speed control at operator's finger tips.

Instantly reversible, one-motion clutch control, hand operated from any examining position.

Let-off brake controlled from front of machine.

Any fabric can be examined face or back because take-ups operate clockwise or counter-clockwise.

Center-bar quills ball-bearing mounted . . . opposite end equipped with new, Van Vlaanderen positive center-bar lock.

This new, superior examining machine will handle rolls of any fabric up to 36" in diameter. Examining board is 36" high in 60" or 72" widths. Special widths available. Machine equipped with precision clock measuring yards and eighths. Attachment available for running tube to tube or shell to tube. Ball bearings throughout...sealed for life. Completely enclosed drive. Oversize disk clutches. Hard chrome-plated guide rolls.

Ask us about this machine.

VAN VLAANDEREN MACHINE COMPANY

370 Straight Street — Paterson 3, New Jersey

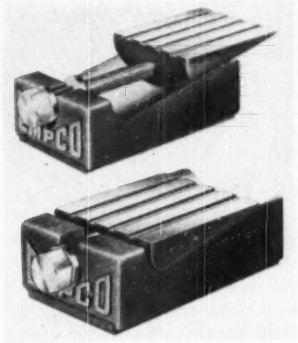
World's largest manufacturer of machines for processing woolen fabrics

is also available which does not direct light upward, but diffuses it uniformly in the vertical and horizontal planes. Can be utilized when no vision sash is desired.

Insulux Division, American Structural Products Co., Toledo 1, Ohio. (F-137)

Machine Leveling Jack

A machine leveling jack now on the market features vibration absorbing mounting pads which are said to eliminate creepage and reduce machine maintenance costs due to vibration. Lower in design, 2" high, 6" long, and 3½" wide, the new



Machine Leveling Jack (Enterprise).

jack's self-aligning feature has been improved by compensating for more unevenness of floor while retaining full bearing of lifting surfaces up to maximum height of adjustment. "Turn-O'-Screw" leveling feature saves time on installation and periodical re-leveling adjustments.

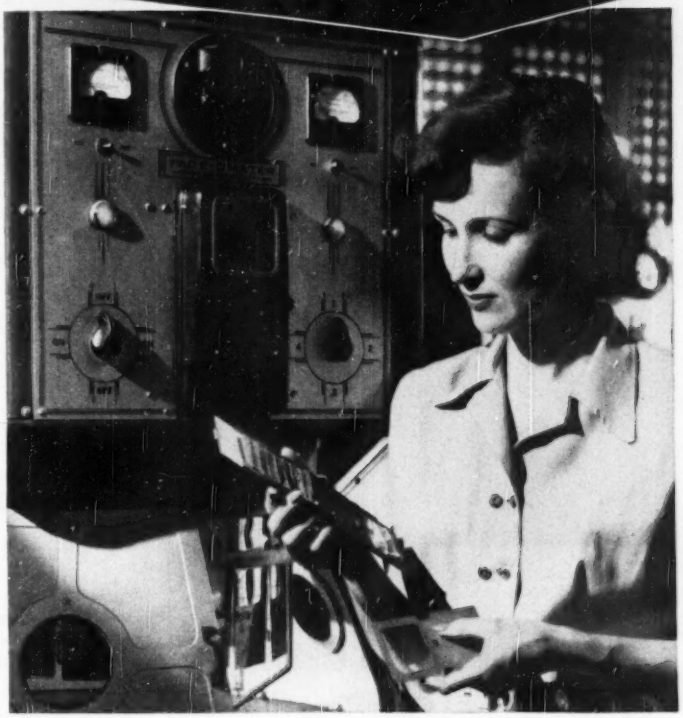
Enterprise Machine Parts Corp., 2731 Jerome Ave., Detroit 12, Mich. (F-135)

New Taber Abraser

Recently developed for testing abrasion resistance of solid materials and coated surfaces is the Model 140 Taber Abraser which incorporates rotary rub-wear action of dual abrading wheels criss-crossing their abrasion path—right wheel rubs specimen from center outward and left wheel specimen from outside in toward center. This action is continuous throughout the 360-degree rotation of the specimen and closely parallels abrasive wear encountered

This ATLAS FADE-OMETER

. . . is guinea pig for more than 3,000,000 women



Women who use the Good Housekeeping Guaranty Seal as a guide in purchasing fabrics know that it is the distinctive mark of dependable quality. Before granting the Seal, the Good Housekeeping Textile Laboratory uses an Atlas Fade-Ometer to measure fading of colors caused by sunlight on each fabric.

In the Fade-Ometer, dyed fabrics — plastics — and a host of other products — are carefully evaluated for their resistance to the fading action of sunlight. As the source of light, the Fade-Ometer utilizes the Enclosed Violet Carbon Arc, recognized as an excellent reproduction of natural sunlight. Samples are rotated around this source, and light is highly concentrated so that the effects of sunlight are accelerated many times.

Relatively short exposure in the Fade-Ometer, therefore, is equal to months of outdoor sunlight and on the basis of test results the Textile Laboratory can safely predict whether or not the fabric will be satisfactory in actual use.

Operation of the Fade-Ometer is simple and fully automatic so that it may safely be left in continuous operation overnight. The degree of fading on each sample is measured in terms of Standard Fading Hours.

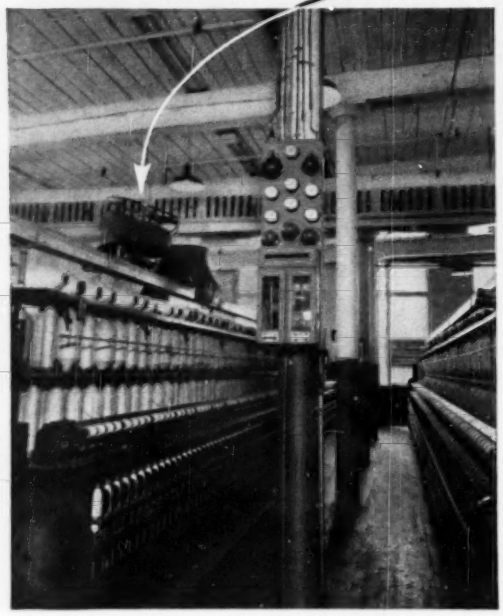
ATLAS ELECTRIC DEVICES COMPANY

361 West Superior St., Chicago 10, Illinois

LAUNDER-OMETERS — WEATHER-OMETERS — FADE-OMETERS

No Fly on this Ceiling

with ParksTurbo Up-draft Cleaner



Lint, dust and fly not allowed to settle on lights, piping, ceiling and things.

ParksTurbo Up-draft Cleaner

A Paying Addition

This addition to mechanical cleaning rounds out the work of ParksTurbo Traveling Cleaner (CT type, track on frames). *Or may be installed and operated quite independently.*

Up-draft hood rotates as it travels, producing a confined high velocity column of air. This air column, with its constantly changing angle, mushrooms, sweeping surfaces clean and spreading rapidly in all directions. An added and most effective cleaning function without cluttering up the room.

And what a difference
a clean room makes!

Parks-Cramer Company

Fitchburg, Mass. PARKS Certified Climate Charlotte, N. C.

IN CARD CLOTHING, TOO...

THE KNEE MUST BE RIGHT

The setting on a card can have an important bearing on the quality of finished fabrics. Some cards may call for extra strong pitch, others for a slack pitch . . . but in either case, the knee must be right.

Wissco takes special precautions to make certain that the knee, formed by the angle and pitch of the staple, is accurate. Before an order is run off, test samples are checked with a card gauge. When the order is in production, a special instrument maintains an accurate gauge on the degree or pitch of the wire. And the fabricated clothing is checked again before it is precision-ground.

Wissco Card and Napper Clothing is the perfect combination of wire and foundation. A test run on the finest soft handling stock will convince you. We'll be happy to send you detailed information.

Sales Office and Plant: 56 Sterling St., Clinton, Mass.
Executive Office: 500 Fifth Avenue, New York 18, N. Y.
District Offices: Boston, Buffalo, Chicago, Detroit, Denver, New York, Philadelphia.
Pacific Coast: The California Wire Cloth Corporation, Oakland 6, Cal.

Wissco CARD AND NAPPER CLOTHING

FOR COTTON, RAYON, WOOL, WORSTED, ASBESTOS AND SPECIALTIES

A Product of Wickwire Spencer Steel Division of The Colorado Fuel And Iron Corporation

Tabor Abraser.

in actual use, according to the manufacturer.

Features include: sturdier shafts and larger ball bearings, a capacitor type motor with heavy duty worm gear drive, extra powerful vacuum unit with dual suction nozzle for high efficiency pick-up of abradings, and electric counter for registering wear cycles.

Three standard ranges of wheel pressures may be applied against the specimen: 250, 500, and 1000 grams. Variety of holders for different types of specimens.

Taber Instrument Corp., 159 Goundry St., North Tonawanda, N. Y.

For additional data, request item F-103, using business reply card on page 220.

Rotating Clamp Device for Fork-Lift Trucks

For faster and more efficient handling of textiles and other materials in roll form, a rotating clamp device is available for use on gas and electric fork-lift trucks with standard rated capacities of 3000 to 5000 pounds. Handles rolls in either vertical or horizontal position and can change from one position to the other.

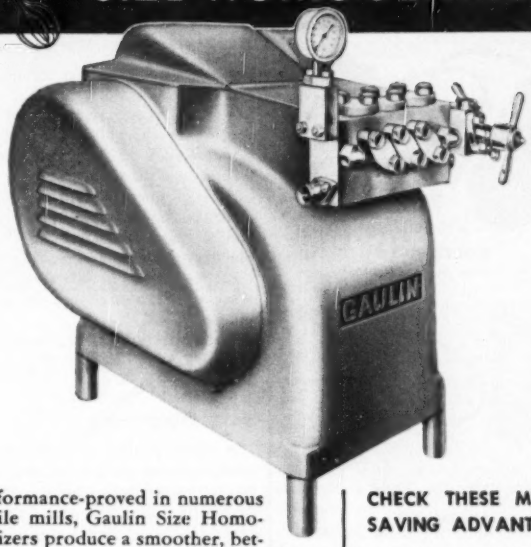
Clark Equipment Co., Industrial Truck Division, Battle Creek, Mich. (F-116)

Gas-Charged Extinguisher

A recently developed cartridge-operated water type fire extinguisher with stainless steel shell is reported to have numerous advantages. Annual recharging is unnecessary—only when extinguisher is discharged

Recipe FOR CUTTING SLASHING AND WEAVING COSTS...

USE GAULIN SIZE HOMOGENIZERS



Performance-proved in numerous textile mills, Gaulin Size Homogenizers produce a smoother, better size which increases production, insures more uniform product and reduces costs.

With a Gaulin Homogenizer there are no long periods of cooking. The mixture is simply heated to the swelling point of the starch and immediately homogenized. The entire process takes about 30 minutes compared to hours consumed under the old cooking method.

Installation is simple . . . can be made over the weekend without production interruption. Mail the coupon below for immediate information and catalog.

CHECK THESE MONEY SAVING ADVANTAGES

1. Reduce cooking time, lower steam costs by as much as 50%.
2. Reduce the amount of starch and softness required.
3. Permit higher slasher feeds, increased loom efficiency.
4. Provide more uniform size and better penetration of yarn.
5. Reduce shedding in slashers and looms.
6. Permit storage of excess size over weekend without deterioration.

Gaulin TRADE MARK

MANTON GAULIN MFG. CO., INC.
51 GARDEN STREET, EVERETT 49, MASS.
Southern Representative: 107 Atwood St., Greenville, S.C.

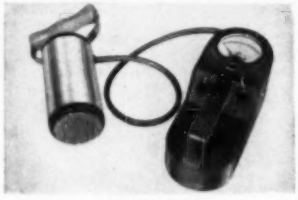
MAIL COUPON TODAY

Gentlemen: Please send complete information on Gaulin Size Homogenizers and booklet on homogenized size preparation.

NAME .....
COMPANY ..... TITLE .....
CITY ..... STATE .....

2 Great Models
for
TESTING MOISTURE CONTENT
in
- Wool
- Cotton
- Rayon and
- Nylon

MODEL PD-1
for textiles in loose or compressible forms—3" penetration.



MODEL K-2
for textiles in cones, rolls, beams and similar forms.

10-DAY FREE TRIAL!
Try one of these moisture testing instruments for 10 days—use it, test it and prove its superiority. Send samples, moisture range and Purchase Order to cover trial period. No obligation!

Quick, Accurate Readings
In less than 3 seconds you can test moisture content of practically all types of textile materials, including cotton, wool, rayon and nylon in fabrics, packages and loose forms.
This portable instrument is designed for "on the spot" checks in your plant. Moisture Register is easy to operate—requires no technical knowledge or complicated figuring. Cost is negligible in comparison to advantages. Write today for complete details. Specify type of material to be tested.

MOISTURE REGISTER CO.
Dept. H, 133 North Garfield, Alhambra, Calif.

ELECTRONIC MOISTURE REGISTER
The standard in moisture testing

does the carbon dioxide pressure cartridge need replacement and water need replenishing. When extinguisher is turned upside down and struck on the floor, gas is released inside gradually, producing a steady, 40-foot stream of water. Extinguisher is lighter, stronger, and equipped with a plastic transparent nozzle.

Pyrene Manufacturing Co., 560 Belmont Ave., Newark 8, N. J. (F-117)

Stereoscopic Microscope

Designed specifically for use in industrial laboratories, etc., a new Model 20 Spencer stereoscopic microscope incorporates enhanced three dimensional vision, wide and flat shields, comfortable angle of vision, dustproof nosepieces, and enclosed gearing for interpupillary distance control. Available with single, double, or triple nosepieces; vertical or inclined binocular bodies; and a wide selection of objectives and eyepieces.

American Optical Co., Southbridge, Mass. (F-119)

Salt Dispenser

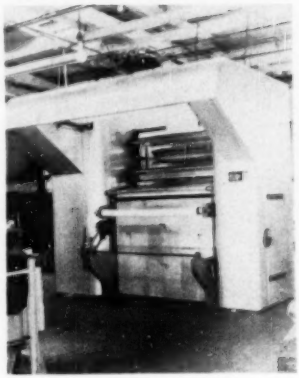
A clear plastic salt dispenser recently placed on the market is said to be expendable—when the salt supply is exhausted, the unit is discarded. Called the Fairway Crystal, the dispenser contains 500 Enteric coated salt tablets that are said to regulate dissolution and prevent nausea. Replacement of the crystal is simplified by an uncomplicated wall bracket which is included with each unit.

Standard Safety Equipment Co., 232 W. Ontario St., Chicago 10, Ill. (F-120)

Multi-Purpose Power Hoist

A multi-purpose power hoist now being manufactured lifts 500 pounds at 25 feet per minute or 250 pounds at 50 feet per minute. Electrically operated, the unit comes complete with adjustable track trolleys for both single or double wheel tracks, a ¼ hp single phase reversing motor, cable for 10 and 20-foot lifts, grooved drum, automatic brake, and conventional hook attachments. Unit is also adaptable as a power unit at 62 rpm.

Flinchbaugh Co., York, Pa. (F-121)



Heat Setter (National).

Heat Setting Machine for Nylon Fabrics

Continuous automatic air cooling system, controlled and reproducible tension, and low fuel consumption are features reported to contribute to the successful operation of a nylon heat setting machine now available.

The machine is designed for continuous feed, a wide range of variable speeds, and operating temperatures up to 500 F and higher. It is of rigid and durable construction.

Heated cylinders are equipped with automatically controlled gas burners which transfer their heat to a constantly circulated "Downtherm" core. Temperature on each cylinder is individually adjustable by a controller sensitive to plus or minus 0.2 F.

A heat-reflective enclosure aids in maintaining greater uniformity and thermal efficiency. Micro-grooved roll surfaces reduce filling shrinkage.

The National Drying Machinery Co., Hancock St. and Lehigh Ave., Philadelphia 33, Pa.

For additional data, request item F-115, using business reply card on page 220.

New Developed Yellow

Diazophenyl Fast Yellow 3GL, when used with Developer Z, produces a greener shade of yellow than the types previously offered, according to the dyestuff manufacturer.

The color is said to have excellent resistance to perspiration, wet fastness, washing, dry and wet pressing, dry and wet cleaning, and water

bleeding. Its shade and light fastness are not materially affected by urea formaldehyde finish; its wash fastness is slightly improved by it.

Geigy Co., Inc., 89-91 Barclay St., New York 8, N. Y.

For additional data, request item F-113, using business reply card on page 220.

Hysteresis Torque Device Controls Yarn Tension

An experimental device, utilizing the hysteresis torque principle, has been developed which is said to control yarn tension to accuracies previously impossible.

According to the announcement, the new hysteresis brake will apply equal tension to all ends from creel to warper and will eliminate scuffing and excessive flexing of delicate yarns. It also provides simplified pre-setting of any tension desired in a specific application.

Commercially unavailable at the present time, the device is being offered for use in field trials.

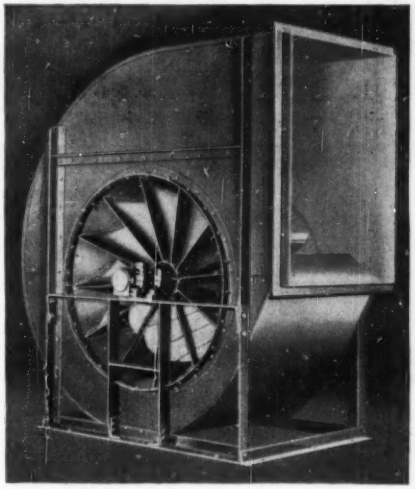
Using a pulley which has its rotation retarded by a magnetic drag, or

Hysteresis Torque Device (G. E.)

hysteresis effect, the new device is entirely free of the disadvantages inherent in friction of yarns, surface clogging and wear, and the influence of atmospheric conditions. It consists of a rotor and a stator, both containing Alnico magnets so designed and mounted that the magnetic restraining force on the rotor is the same at all speeds.

The yarn passes around a rotating pulley designed to eliminate slippage of the rotor against a uniform mag-

It Takes a LOT of Air TO PRODUCE *Textiles*



AT PEAK EFFICIENCY

and Here's the Fan to do it!

"Buffalo" LIMIT-LOAD FAN

Keeping plenty of fresh air circulating through hot or humid areas in the textile mill improves both worker efficiency and product quality. "Buffalo" Limit-Load Fans are generally your cheapest method of distributing these large volumes of air. LL fans are non-overloading. They operate at high efficiencies on relatively high pressure systems. They're excellent where you need an air exhaust system, or for drawing air through air washers. For other air applications, "Buffalo" builds a complete line of specialized fans. Ask your nearby "Buffalo" engineering representative for unbiased advice.

WRITE FOR BULLETIN 3675

with its complete engineering data on "Buffalo" Limit-Load Fans, performance curves and other helpful information.

A WEALTH Of Air Information —only $6.00!

If your job has to do with AIR, you'll want FAN ENGINEERING! In its 5th Edition, this 808-page pocket-size manual gives you quick, practical answers on air, its applications and the equipment to handle its many jobs. ORDER NOW! $6.00 Postpaid In U. S. A.

BUFFALO FORGE COMPANY

175 Mortimer Street, Buffalo, N. Y.

Canadian Blower & Forge Co., Ltd., Kitchener, Ont.

Branch Offices in all Principal Cities

Bronze, Iron, Steel and Corrosion-Resisting Valves-

POWELL MAKES THEM ALL!

Fig. 1708 — 200-pound Bronze Globe Valve with screwed ends, union bonnet, renewable, specially heat treated stainless steel seat and regrindable, renewable "Powellium" nickel-bronze disc.

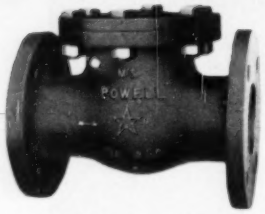


Fig. 2433 — 150 - pound Bronze Regrinding Swing Check Valve. Flanged ends and bolted flanged cap. Disc has ample lift to permit full, straightway, unobstructed flow through the valve body.

When you come to ONE SOURCE, you simplify your valve buying—and stocking of spare valves and parts—for your entire flow control system.

Powell Bronze, Iron, and Steel Valves are second to none in giving long, trouble-free service. And when it comes to Special Design and Alloy Valves for Corrosion Resistance, Powell is the acknowledged leader. In fact, Powell makes the *only* COMPLETE line of these valves available to Industry today.

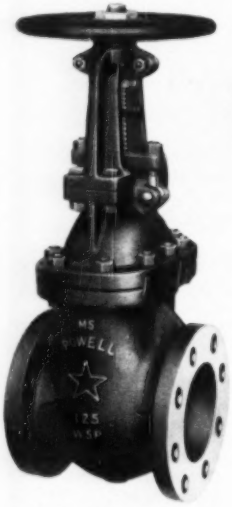


Fig. 1793 — Large 125-pound Iron Body Bronze Mounted Gate Valve. Flanged ends, bolted flanged yoke, outside screw rising stem and tapered solid wedge. Also available in All Iron.

Fig. 1944—Large 150-pound Stainless Steel "Y" Valve with flanged ends, bolted flanged yoke-bonnet and outside screw rising stem. Sizes 2½" to 12", inclusive.

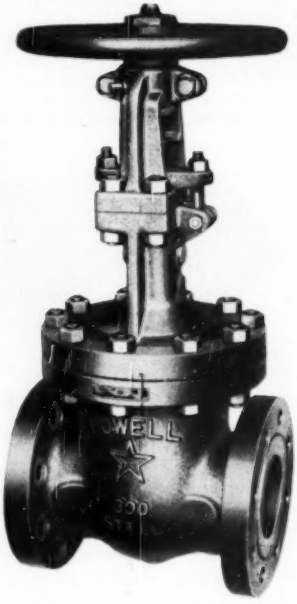


Fig. 3003—Class 300-pound Cast Steel Gate Valve with flanged ends, outside screw rising stem, bolted flanged yoke and tapered solid wedge.

The Complete Powell Line includes Globe, Angle, "Y", Gate, Check, Non-return, Relief and Flush Bottom Tank Valves in Bronze, Iron, Steel and a wide range of Corrosion-resistant metals and alloys.

Ask your nearest Distributor—or write direct

The Wm. Powell Co., Cincinnati 22, Ohio

DISTRIBUTORS AND STOCKS IN ALL PRINCIPAL CITIES

POWELL VALVES

netic restraining torque. Tension adjustments required to accommodate different sizes and types of yarn are made easily by turning the calibrated head. The hysteresis brake will apply tensions adjustable over a range of 3½ to 10½ gram-inches at speeds up to 700 yards per minute, it is reported.

General Electric Co., Controls Division, Schenectady 5, N. Y.

For additional data, request item F-105, using business reply card on page 220.

Adjustable Diameter Sheave

An adjustable diameter V-belt sheave has been marketed with taper bushing and taper sleeve on which the flanges are mounted. This double-taper hub feature, in addition to providing easy mounting and dismounting of the sheave, is designed to rigidly lock the unit into a single, "solid" sheave, thereby eliminating vibration, wear, and corrosion. Other advantages claimed: silent operation; elimination of V-belt misalignment.

The American Pulley Co., 4200 Wissahickon Ave., Philadelphia, Pa. (F-122)

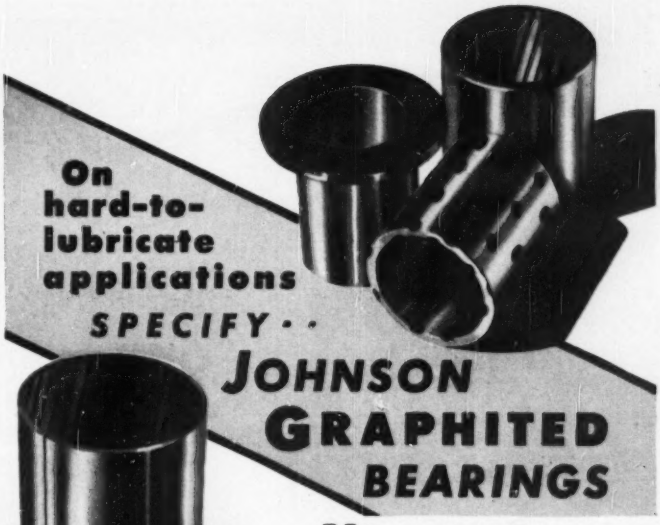
Gravity Feed Oiler Has Ratchet Control

Instant adjustment of the oil feed is one of the outstanding features claimed for a new gravity feed oiler with a ratchet control mechanism. Adjusting device is locked into position by a spring arrangement, preventing changes in the rate of feed due to handling, cleaning, vibration, etc. Mechanism protected from dust by cap. Oil supply is visible through shatterproof, reinforced plastic reservoir. Available in 1, 2, 4 and 8 oz. capacities; ⅛, ¼ and ⅜" pipe thread.

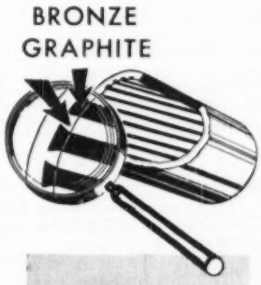
Trico Fuse Mfg. Co., North Fifth at West Chambers, Milwaukee 12, Wis. (F-124)

All-Purpose Floor Machine

A new all-purpose floor machine incorporates the following seven features which, according to the manufacturer, operators have found helpful and practical: Rotary safety-grip switch; finger tip solution control; fully adjustable handle; self-raising wheels; automatic brush



YOU can eliminate bearing troubles on applications where lubrication is difficult or liable to be neglected. Johnson Graphited Bearings are designed for 40 to 45% graphite contact with the shaft, thus supplying constant free-running without further lubrication. In addition, Johnson Graphited Bearings are highly desirable where ordinary lubricants may damage food, textiles and other goods in process. They are widely used on conveyor rolls, immersion rolls in textile and paper industries, pumps handling corrosive liquids, and many other heavy-duty applications. Johnson Graphited Bearings are manufactured in cast bronze and sheet bronze. They are available in serrated and in plug types as illustrated. If you have such a troublesome bearing problem, write, wire or call for further information.

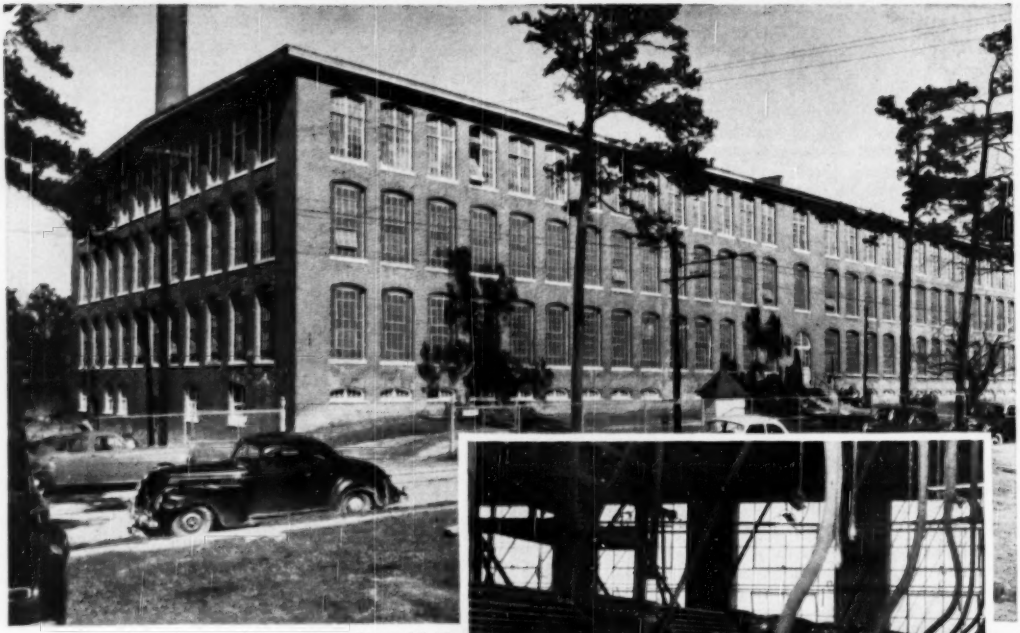


Graphite held permanently in place. Graphite area increases with wear. Not soluble in gasoline, oil or water.

●

SELF LUBRICATING LEDALOYL bearings, produced by powder metallurgy, are widely used for hard-to-lubricate applications where heavy-duty service is not an important factor. Johnson Bronze engineers will be glad to advise which type, Ledaloyl or Graphited, will best fit your requirements.

Johnson Bronze
SLEEVE BEARING HEADQUARTERS
530 SOUTH MILL STREET · NEW CASTLE, PA.



To reduce glare and incoming sun heat, 3345 lights of Frosted *Aklo* Glass were used to re-glaze the windows of the Belton Cotton Mills in Belton, South Carolina.

FILTERED DAYLIGHT

. . . for reduction of glare and sun heat

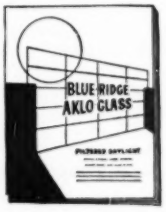
Better workmanship and reduction of accidents are logical results of better seeing. That's why so many plant owners glaze their buildings—old and new—with Frosted *Aklo** Glass. This blue-green glass reduces glare—provides filtered daylight that means less eye fatigue.

Aklo Glass keeps building interiors cooler in summer. It absorbs infrared rays of the sun, re-radiating much of this heat back outdoors. *Aklo* excludes two and one-half times as much radiated sun heat as does regular glass. Thus, it adds to comfort of workers, aids in temperature control and reduces load on air conditioning.

Aklo Glass is manufactured by the Blue Ridge Glass Corporation of Kingsport, Tennessee, and sold through Libbey·Owens·Ford Glass Distributors. To see for yourself how Frosted *Aklo* Glass reduces glare and sun heat, ask your distributor for a Radiometer demonstration. *®

Free Book on Reduction of Sun Glare and Heat

Write to Blue Ridge Sales Division, Libbey · Owens · Ford Glass Company, 9465 Nicholas Building, Toledo 3, Ohio.



BLUE RIDGE AKLO GLASS

Heat Absorbing • Glare Reducing • Figured and Wire Glass

coupler; "Foam-Feed" brush design; and quick-change snap-on brush rings.

Breuer Electric Mfg. Co., 5100 Ravenswood Ave., Chicago 40, Ill. (F-125)

8-Foot Fluorescent Fixture

An eight-foot, two-lamp fluorescent lighting fixture for continuous row lighting applications in industrial plants allows appreciable economies in installation costs, according to the manufacturer. Equipped with two 75-watt T-12 Slimline fluorescent lamps which are instant starting, the new fixture—designated the HFFS-296—can be easily maintained by one man since two four-foot reflectors are used. For finishing out a row of these 8-foot fixtures, a four-foot companion fixture is available; it is designated the HFFS-248 and utilizes two 40-watt single pin instant-start fluorescent lamps and one reflector.

Sylvania Electric Products, Inc., Fixture Div., 500 Fifth Ave., New York 18, N. Y. (F-118)

Cradle-Mounted, Centrifugal Process Pumps

Some of the features incorporated in a new line of cradle-mounted centrifugal process pumps are: deep water-cooled stuffing box, smothering gland, ring oil lubricated ball bearings, a heavy cradle shaft and bearing, sturdy channel steel baseplate and an all metal coupling. Impeller is hydraulically balanced. Built in five sizes, single and two-stage. Capacities up to 1600 gpm and heads up to 250 feet. Horsepower range from ¼ to 75. Various types of drives available.

Ingersoll-Rand Co., 11 Broadway, New York 4, N. Y. (F-143)

Metal Parts Retrieved with New Tank Magnet

For removing ferrous parts and contamination from tanks containing acid and alkaline baths, etc., a tank magnet has been placed on the market. It is said to be temperature-proof, acid and alkali-proof, and is operated very much like a carpet sweeper, with magnetic tube mounted between neoprene wheels. Ferrous material moves to magnet and spreads itself over entire circumference to a thickness of about

With labor costs as they are, the fast, *mechanized* TENNANT System can save you more *today* than ever—besides eliminating scrubbing. Here are 5 reasons why TENNANT "dry cleaned" floors are cleaner . . . brighter . . . safer—yet *cost you less:*

1 **Requires less manhours** for floor maintenance because floors can be cleaned *faster* . . . stay clean longer. Unlike rough, dirt-catching scrubbed floors, Tennant-cleaned floors are smooth, hard, dirt-resistant . . . clean up like magic! Saves time and expense.

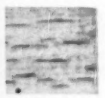
2 **Makes floors easy to clean.** Fast, low-cost "dry cleaning" with a Tennant Machine keeps floors bright, durable. Only daily care is dry mop sweeping.

3 **Cuts accident costs.** Helps keep floors DRY and safe. Aids morale.

4 **Makes floors last longer** by protecting against dampness, decay and wear.

5 **Helps prevent losses** of yarn and cloth from splinter-snags and dirt.

SCRUBBED


DRY-CLEANED

HERE'S WHAT HAPPENS when you stop scrubbing your floors and switch to economical Tennant "dry cleaning."

Microphoto at left shows typical surface of a scrubbed floor. Note how water has broken down top wood structure and caused rough, jagged, dirt-catching splinters. This makes floor hard to clean, and it breaks down rapidly under heavy traffic.

In contrast, microphoto of a Tennant "dry cleaned" floor (right) shows how the bright, smooth, protectively sealed floor resists dirt and wear . . . and is easily cleaned with minimum manpower.

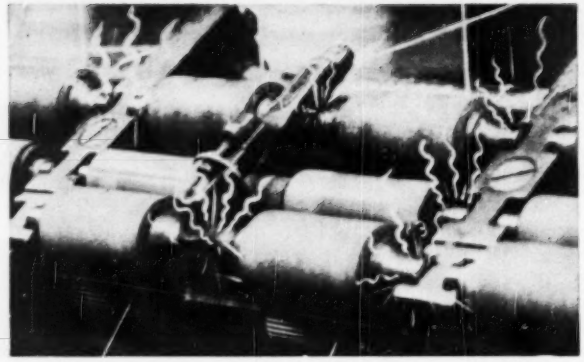
Write Today! Learn how mechanized "dry cleaning" can save you money. Ask for new bulletin "HOW TO GET BETTER RESULTS IN TEXTILE FLOOR MAINTENANCE."

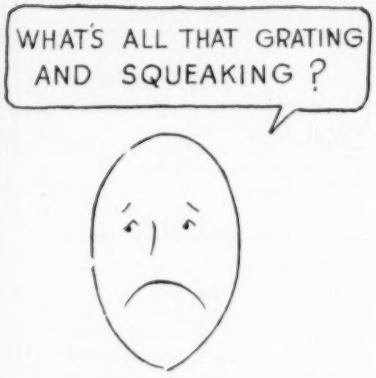
The way to finer floors
TENNANT
Floor Maintenance System

ESTABLISHED 1870

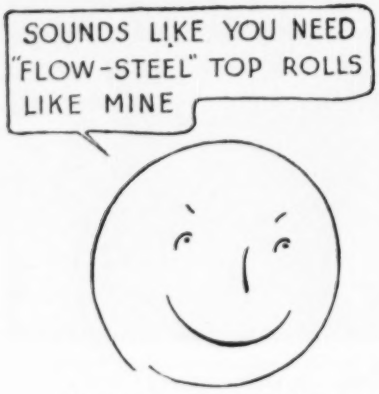
G. H. TENNANT CO.
2524 North Second Street
Minneapolis 11, Minnesota

OFFICES IN PRINCIPAL CITIES

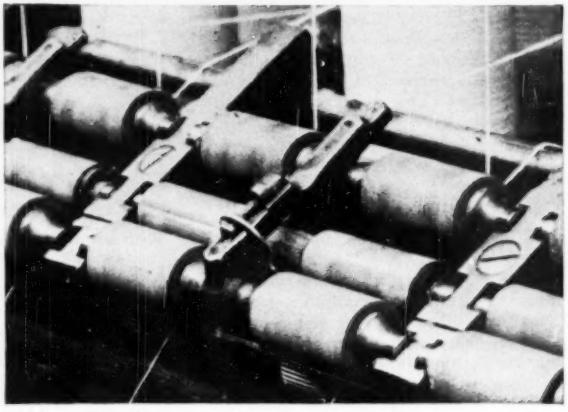




Surely those top rolls can't need oil again. It's only been a couple of days. We're still throwing out seconds caused by oil spotting.



I had the same trouble with my top rolls until I had them "flow steel" treated by Ideal Machine Shops. They put oil-retaining hard steel on the middle and ends of my rolls. Now I oil them only about a fourth as often as I used to.



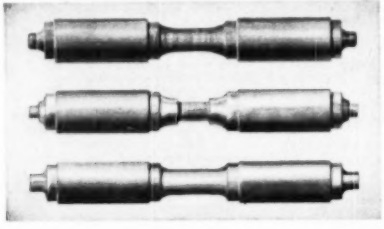


Illustration at left shows

TOP—A roll scarred and scratched, caused by friction and drag. CENTER—Roll is prepared for the deposit of special oil-retaining steel. BOTTOM—Roll is reconditioned by Ideal's FLOW STEEL method to last longer and use less oil.

IDEAL MACHINE SHOPS, INC.

Phones 4161 and 4391

BESSEMER CITY, NORTH CAROLINA

26TH YEAR OF CONTINUOUS SERVICE TO TEXTILE MILLS

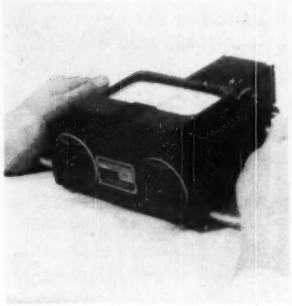
¾". Unloading is accomplished at either end by pushing upper ring from one end of tube to other where non-magnetic section causes load to be released.

Eriez Manufacturing Co., Erie, Pa. (F-136)

Statically Charged Areas Located by Instrument

An Electrostatic Voltmeter developed by the Institute of Textile Technology is designed to locate areas of static electricity in textile plants. It provides an indication of the amount of electrical charge on moving or stationary equipment or materials. As a result of information obtained, corrective action can be initiated before production losses become excessive.

This readily portable instrument (weight 3 pounds, 10 ounces) is of



Electrostatic Voltmeter (Specialties, Inc.).

sturdy construction and does not require technically trained personnel to make qualitative determinations.

It is extremely sensitive, with provision made to permit reduction of sensitivity to one-tenth or one one-hundredth. Full sensitivity is employed for general area inspection, and the lesser sensitivities permit close examination without sending the meter needle off scale. A charged area can be quickly located and its extent accurately determined.

Those parts of the instrument most likely to be affected by moisture and lint are sealed to insure trouble-free life.

Power is self-contained. An easily accessible flashlight cell requires replacement every six months. The balance of power is supplied by mercury type batteries which, in normal usage, should not require replacement for three years. The simple operating instructions are permanently attached to the bottom of the instrument.

Specialties, Inc., Syosset, L. I., N. Y.

For additional data, request item F-102, using business reply card on page 220.

Improved V-Belt Utilizes New Fiber

A chemically produced fiber said to possess high strength, low stretch and excellent shock absorbing qualities has been incorporated in a new line of V-belts designated "HYT." The new cord is also water

DIRECT from warehouse TO YOU

One of the South's largest varieties of steel products is within reach of your telephone or over-night mail . . . ready for rapid delivery to you.

Here are a few of the hundreds of items available:

Hot-rolled rounds, squares, flats, strip, sheets and plates • Structural angles and channels • I-beams and H-beams • Stainless steels • Rigidized metals • Cold-rolled sheets, rounds, squares and flats • Galvanized sheets • Copper sheets, strip, rolls • Screw stock • Bolts, nuts and rivets

There are plenty of others! We'll be glad to send you regularly our complete stock list as it is issued. Complete warehouse services are also available to you.

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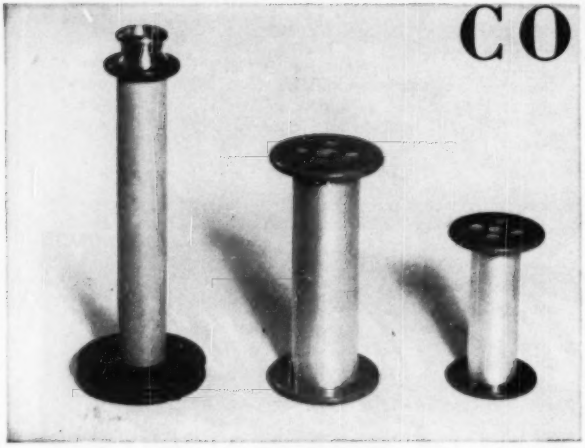
Bobbins that are truly

CONCENTRIC



Because of

LESTERSHIRE UNIT CONSTRUCTION

(Patent Applied For)

Made from a stable material of uniform structure such as Aluminum, Magnesium, Bakelite, or their combinations.

REMEMBER

that the yarn content of a filled bobbin weighs several times as much as the bobbin itself.

Is it not, then, more important to have the yarn wound on bobbins that are truly concentric, and therefore in true BALANCE at all times. than to have only the bobbins in balance?

It is to make certain of this permanent balance by concentricity that Lestershire bobbins embody the Lestershire exclusive Unit Construction principle, and are made from materials that are not distorted by wear, moisture, or temperature.

Much needless anxiety is expended on the question of dynamic and static balancing of bobbins to lessen spindle wear. Balance without true **concentricity,** is of little value. Only a stable material can be manufactured and depended on to remain in both concentricity and balance. Whether empty or filled, Lestershire bobbins retain true concentricity.

Lestershire's UNIT CONSTRUCTION gives true concentricity in bobbins for spinning rayon, nylon, and other synthetics, greatly reducing spindle wear and assuring long trouble-free life of bobbins.

All parts are machined to closest tolerances: Concentricity — .003" T.I.R. — Spindle Fit ±.0015" — Traverse ±.0025" — Dynamic/Static Balance (at slight extra cost) .01 ounce inches. Finished satin smooth to prevent yarn abrasions.

Almost any size or type of bobbin can be made "Unit" construction.

Send for all the facts about Lestershire "Unit" Construction

LESTERSHIRE SPOOL & MFG. CO.

JOHNSON CITY, NEW YORK

Branch Offices and Technical Service

R. B. Dorman—1000 Peachtree St., Atlanta, Ga.

Joseph H. Windle, Jr.—231 So. Main Street, Providence 3, R. I.

Odell Mill Supply Co., Greensboro, N. C.

Greenville Textile Supply Co., Greenville, S. C.

W. S. Taylor, Inc., 52 Vanderbilt Ave., New York 17, N. Y.

and mildew resistant, according to the manufacturer. Resistance to shrinkage is another advantage cited. Other materials which form outside cover have been treated with a mildew inhibiting agent.

Goodyear Tire & Rubber Co., Akron, Ohio. (F-140)

Canister Type Demineralizer for Laboratory Service

The design and capacity of the C51L Hydrion makes this canister demineralizer ideal for laboratory and general work, according to the manufacturer. By direct attachment to the water faucet, distilled quality water can be had by simply opening the faucet. A graduated indicator shows the exact purity of the effluent water in terms of conductivity at all times, making it practical to continuously draw off mineral-free water of as high a purity as desired. Disposable refills are employed; indicator signals before exhaustion of the charge. Flow rate up to 10 gallons per hour.

A. E. Tomkin & Co., 1828 Columbia Road, N. W., Washington 9, D. C. (F-132)

Package Type Steam Generator

The recently developed Model C300 package type steam generator, available in pressures from 15 to 200 psi, may be fired either with light oil, heavy oil, gas, or a combination of gas and oil. Unit is fully assembled, piped, wired, and test fired for performance prior to shipment. Entire boiler surface insulated.

Cyclotherm Corp., Oswego, N. Y. (F-133)

Multi-Purpose Grease

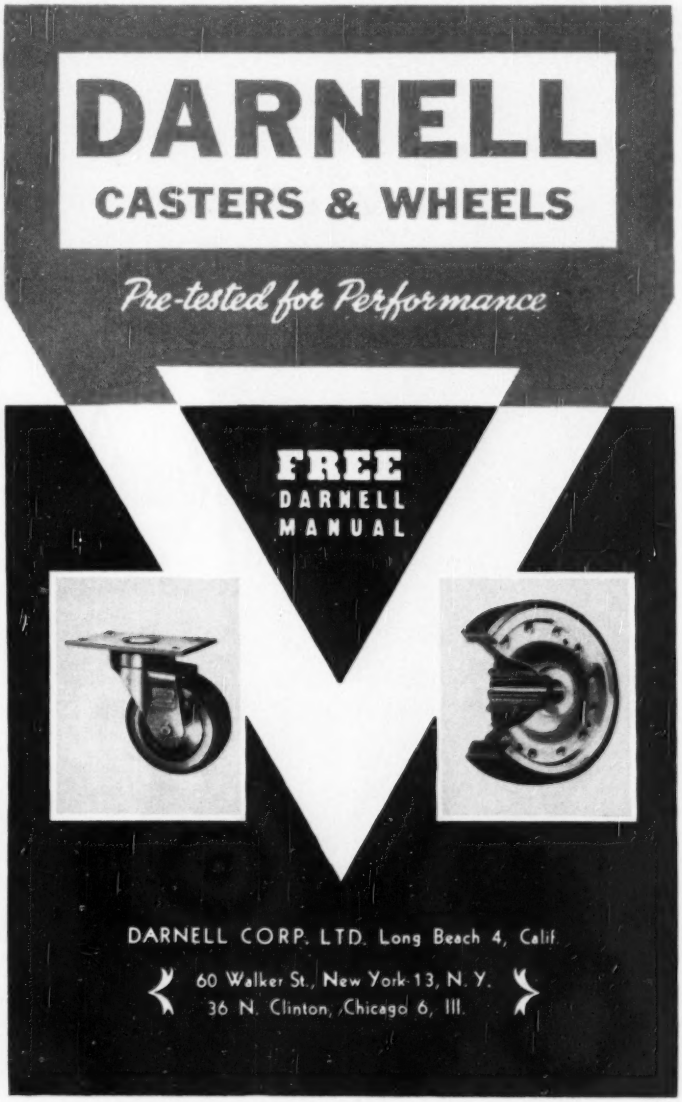
Alvania, a new multi-purpose industrial grease, is now available. It has a high melting point and provides great resistance to water; pumpable at low temperatures; possesses great oxidation stability, prevents excessive wear. Intervals between greasings may be extended when this product is used, according to the manufacturer. Inventories may be simplified since the need for a large number of different greases is eliminated.

Shell Oil Co., 50 West 50th St., New York 20, N. Y. (F-141)

Induction Motor Starter

Designed for either across-the-line starting of squirrel cage induction motors, or as a primary switch for wound rotor induction motors, a new a-c magnetic, non-reversing De-ion Life-Linestarter provides complete protection of motor, machine, and operator. Starter has only one moving part, a "see-saw" lever balanced on a knife-edge bearing or center fulcrum; it cannot jam or stick, according to the manufacturer, and a positive kick-out spring insures uniform operation. Arcs extinguished in a half-cycle or less. Insulating parts will not carbonize, are shock resistant.

Westinghouse Electric Corp., P. O. Box 2099, Pittsburgh 30, Pa. (F-134)



A Dream Come True

It began with a designer's dream of what a wedding gown should be. Manufacturer and chemist took it from there, working side by side to develop the proper scouring agents and finishes for this lace fabric . . . creating delicate softness, graceful folds.

If lifeless fabrics or dull finishes are problems in your mill, why not find out more about Amalgamated Products and Services.

Amalgamated Chemical Corporation Products include Fabric and Hosiery Finishes, Dyeing Assistants and Scouring Agents. Amalgamated Field Representatives are experienced textile chemists, ready to assist with any textile chemical problem. Our modern, fully equipped research and production laboratories are at your service for better fabrics, bigger profits. Write or call Amalgamated.

AMALGAMATED CHEMICAL CORP., Phila. 34, Pa.
Southern Division: 1819 Spring Garden Street, Greensboro, N. C.

Amalgamated

WHAT THE TEXTILE MILLS ARE DOING

A two-story office building is under construction at **Drayton Mills**, Spartanburg, S. C.

The product development and pilot plant activities of the research and development division, **Alexander Smith & Sons Carpet Co.**, will be housed in a recently purchased modern factory building in Ardsley, N. Y., according to a recent announcement.

Contract has been let for the installation of an air-conditioning system in the mill of **Gaffney (S. C.) Manufacturing Co.**

Contract has been let for construction of a four-story addition to the mill of **John P. King Manufacturing Co.**, Augusta, Ga., for improvement of slashing, spooling, and warping operations.

The carded yarn spinning plant of **Anchor Mills Co.**, Huntersville, N. C., has been acquired by Julius W. Abernethy of Newton, N. C., according to a recent report. Mr. Abernethy is head of Abernethy Yarn Mills, Hickory Spinners, Inc., and Carolina Mills, Inc.

Bids have been asked for a one-story addition to **Pepperton Cotton Mills, Inc.**, Jackson, Ga. Improvements to the present mill are planned also.

A 250-acre tract of land near Carlisle, S. C., has been purchased by **Clearwater Finishing Co.**, a subsidiary of the United Merchants & Manufacturers, Inc., for further industrial expansion.

One hundred new looms have been installed by **Crystal Springs Bleachery**, Chickamauga, Ga., in a new air conditioned weave room. Also, a high speed printing machine has been placed in operation in a new addition to the bleachery and print works.

Bemis Bros. Bag Co.'s Golden Anniversary celebration on May 20 was participated in by people throughout the company's organization. The firm, which was founded by Judson Moss Bemis to supply bag materials for his other plants over the country, now operates thirty-one different plants.

Muscogee Manufacturing Co., Columbus, Ga., has contracted for construction of a five-story addition to its mill to expand weaving and finishing operations.

With the installation of 96 additional looms, the Aberdeen, N. C., plant of **Robbins Mills, Inc.**, is increasing its capacity by 50%.

National Safety Council's Distinguished Service Safety Award has been won for the third time by **American Enka Corporation.**

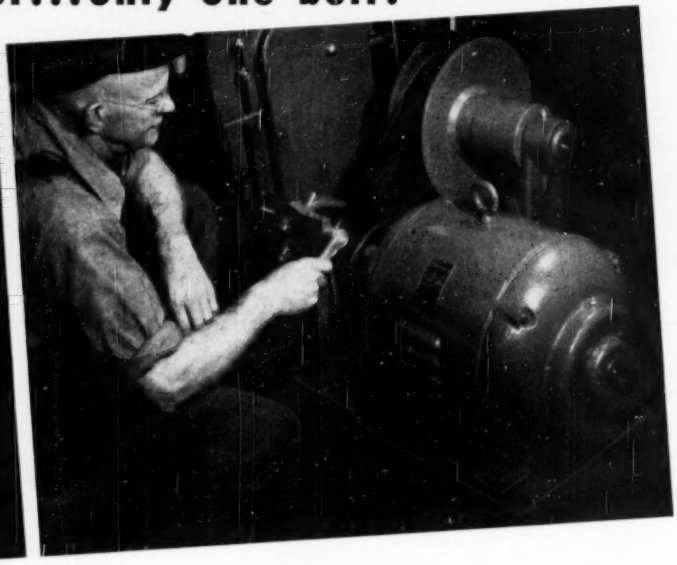
Textron, Inc., has announced the forming of a consumer products di-

MADE TO YOUR SPECIFICATIONS
SLAT APRONS by SARGENT
SARGENT has unlimited facilities for making slat aprons of all types and sizes, and to your exact requirements . . . feed aprons and conveyor aprons for various machines . . . doffer aprons for Wool Washing and Drying Machines . . . bottom and spike aprons for Automatic Feeders of all types. All are made from selected beech or maple that has been thoroughly air dried. Slats are fastened to chains, to leather or to rubber belts. Illustrated . . . are typical Sargent Spiked Aprons built up on especially strong malleable iron chains, supplied with convenient coupling links. These aprons also can be supplied with corrosion-resisting bronze chains, and either monel or stainless steel pins in the slats. Before ordering slat aprons please write us for Complete Information Bulletin (No. 182).
C. G. SARGENT'S SONS CORPORATION
Graniteville, Massachusetts, U.S.A.
LARGEST MANUFACTURERS OF STOCK DRYING AND WOOL WASHING EQUIPMENT IN AMERICA
SINCE 1852

Extra! Reeves introduces

NEW Drive for Spinning Frames... provides correct cylinder speed for any yarn set...uses any standard motor...only one belt!

the new REEVES Vari-Spin Drive



Here is an entirely new, simplified, compact drive developed and thoroughly field-tested by REEVES for spinning frame service.

The REEVES Vari-Spin absolutely eliminates the down time and trouble of changing belts and pulleys in order to change cylinder speeds. You merely turn a speed shifting screw without stopping the frame or interrupting production.

Since the drive has "stepless" and infinitely variable speed adjustability within its range—2.5:1—fine gradations in speed may be secured. This enables you to compensate for excessive tension and varying conditions in humidity and temperature, as well as changes for different sizes of yarn.

With the Vari-Spin, you can have better quality control and fewer ends down; also better spinning room production, especially in mills running high yarn counts and in mills running the larger ring frames where the doff is several hours. In general, increases from 10% and upwards are possible.

The drive uses any standard constant speed motor and one belt. It is designed with a minimum of parts. So compact it requires little more space than a standard motor and can be "nested" in the narrowest aisles of most mills. For complete information, write for Vari-Spin Bulletin 121a-G510.

REEVES PULLEY COMPANY, COLUMBUS, INDIANA

Recognized Leader in the Specialized Field of Speed Control Engineering

accurate · variable **REEVES** *Speed Control*

vision, which will include all present apparel, domestics and finished fabrics operations. James E. Robison, vice-president, has been appointed general manager of the new division.

The new Gregg Finishing Plant of **Graniteville (S. C.) Company** was dedicated in formal ceremonies on May 2. The building was reported to have cost about $4,000,000. The new plant will replace the former Gregg Print Works and will finish all fabrics made by the Graniteville Co. mills.

The new two-story addition to the main plant of **Toscany Fabrics, Inc.**, Passaic, N. J., is devoted to administration and laboratory functions.

Contract has been let for construction of a new waterworks plant for **Dublin (Ga.) Woolen Mills.** The project is expected to cost around $125,000.

Equipment has been installed at **United Piece Dye Works,** Los Angeles, Cal., for handling nylon tricot fabrics.

Approximately 80 automatic looms are scheduled for installation this year by **Cheney Brothers,** Manchester, Conn., as part of its expansion and modernization program.

Plans are under way for a one-story addition to the mill of **Echota Cotton Mills, Inc.,** Calhoun, Ga. It will be used for expansion of weaving operations.

Contract has been let by **Bibb Manufacturing Co.,** Macon, Ga., for a two-story and basement office building.

Olson Rug Co., Chicago, Ill., has let contract for construction of a six-story and basement addition to its plant. Estimated cost, approximately $1,000,000. New Jacquard looms will be installed on two top floors of building.

Bates Manufacturing Co., Lewiston, Me., has begun production of nylon fabrics and also has resumed manufacture of fine corduroy.

Plans are under way by the **Chicopee Manufacturing Corp.,** Manchester, N. H., for manufacture of rayon fabrics at its local mill.

Harris, Emery Co., Inc., Penacook, N. H., has sold its branch mill at Quechee, Vt., and is concentrating production at the Penacook mill.

A one-story mill in Paterson, N. J., formerly occupied by John Hand & Sons, has been leased by **Lucien Forestier Corp.,** New York, N. Y. Equip-

Permanent

Soft Hands on Cotton, Acetate, Bemberg, Viscose and Mixed Constructions

THE ONYXSANS*

become an integral part of the fiber on viscose, bemberg, acetate and cotton goods. The many intriguing and sales-stimulating finishes available with the Onyxsans, ranging in hand from the satin softness of a baby's skin to the mellow smoothness of printed draperies, are *permanent*. Even on other textiles you get outstanding resistance to washing.

Write for this Bulletin

Bulletin TX-1 covers the Onyxsans, their properties, applications and advantages—in complete detail.

*Trade Mark Reg. U. S. Pat. Off.

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ment and facilities are being provided for sizeable output.

The former plant of **Utica Knitting Co.**, Oriskany Falls, N. Y., has been purchased by **Cascade Finishing Co.**, subsidiary of Lily White Sales Co., New York, N. Y. Equipment is being installed for production of cheese cloth, cotton gauze, and allied products.

Spinning and weaving of cotton yarns is being discontinued by **Osage Manufacturing Co.**, Bessemer City, N. J., and approximately $1,500,000 will be used for converting the mills for rayon and other synthetic fiber fabric manufacture.

A three-year expansion and modernization program is being planned by **Burlington Mills Corp.**, Greensboro, N. C., which is reported to involve approximately $40,000,000.

A two-story building is under construction by **Springs Cotton Mills**, Fort Mill, S. C., to house its pilot plant and research laboratory. The cost is reported to be about $1,000,000, with equipment, air conditioning, etc.

American Thread Co., Fall River, Mass., has announced the consolidation of its Hampton Yarn Division, Easthampton, Mass., with Kerr Mills at Fall River. Machinery will be transferred to Kerr Mills for increased production.

Ross Washer is president and treasurer of the newly organized **Veneta Corduroy Corp.**, Lowell, Mass. Manufacture of corduroy and kindred products is contemplated.

Ames Worsted Co., Lowell, Mass., is concentrating its worsted cloth manufacture at its branch mill in Southbridge, Mass.

A one-story addition to its mill, reported to cost about $100,000, with equipment, is planned by **Bernson Silk Mills, Inc.**, Buena Vista, Va.

Plant No. 3 of **Cowikee Mills**, Eufaula, Ala., is converting from the manufacture of cotton to rayon. Cotton yarn and cloth will continue to be produced at Plant No. 1.

Hesslein & Co., Inc., New York, N. Y., has purchased the **Julia Cade Mills**, Guntersville, Ala. They will be operated as the Lakeside Mill, continuing in the same line of manufacture.

A one-story mill extension is being planned by **Colorcraft Corp., Ltd.**, San Francisco, Cal., bleaching and dyeing.

Harry T. Allen, of Gastonia, N. C., has acquired **Forsyth (Ga.) Cotton Mills, Inc.** It is understood that yarns and twines will be manufactured as heretofore.

Hartwell (Ga.) Mills, Inc., is engaged in an expansion program which is expected to double its present capacity. It is reported that the entire project will cost about $750,000.

It is estimated that the recent fire at **Moosehead Woolen Mills, Inc.**, Corinna, Me., caused destruction amounting to approximately $400,000. The mill, which was destroyed, is expected to be rebuilt.

Meyer London is president of the newly chartered **Schneider Products Co., Inc.**, 116 Bedford St., Boston, Mass. Synthetic fabrics of various kinds will be manufactured.

Crescent Corp., Fall River, Mass., has purchased the property and machinery of **Springdale Finishing Co.**, Canton, Mass.

Leslie Mills, Inc., New York, N. Y., was recently chartered to operate a textile finishing plant. Beatrice Schneider, 1412 Broadway, New York, N. Y., is representative for the company.

Robert Westaway, 40 West 40th St., New York, N. Y., is attorney and representative for the newly organized **Oneida Bleachery, Inc.**, New York, N. Y. A bleach, dye, and finishing plant will be operated.

Duplan Corp., New York, N. Y., has announced plans for a new throwing and weaving mill near Burnsville, N. C., to cost approximately $1,000,000, with equipment.

James Lees & Sons Co., Bridgeport, Pa., is planning modernization and improvements in its mills, involving an expenditure of approximately $1,250,000 during current year.

The **Bonham (Tex.) Cotton Mills** observed its 50th anniversary on May 9-10. Beginning with 5000 spindles it now has 17,200 and is the second largest cotton mill in Texas.

Joseph and James Stafford are operating the new **Jamestown (N. Y.) Spinning Co.**, which has been capitalized at $135,000.

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This truck has . . . exclusive aluminum top rim . . . Slotted band-iron bottom . . . all-steel welded frame.

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Underwear Institute Elects Officers

At the annual meeting of the Underwear Institute at the Hotel Commodore in New York City in April, Howard M. Collier of Griffin (Ga.) Knitting Mills was re-elected to serve a second term as chairman of the executive committee of the Institute.

Thomas Russell, Russell Manufacturing Co., Alexander City, Ala., was elected a vice-chairman succeeding W. A. Brownlee of Appalachian Mills Co., Knoxville, Tenn., who became a member of the executive committee. E. L. Gruber of Spring City (Pa.) Knitting Co., C. C. Humphrey of Munsingwear, Inc., Minneapolis, Minn., and James F. Nields, Jr., of Ware (Mass.) Knitters, Inc., were re-elected vice-chairmen.

Continuing in the capacity as president is Roy A. Cheney. Earle E. West is secretary. F. R. Devereux of Oneita Knitting Mills, Utica, N. Y., was re-elected treasurer.

Those named to serve on the executive committee were: H. E. Sims, The Atlas Underwear Co.; Brian W. Clarke, Fort Schuyler Knitting Co.; Howard C. Brown, Textron Inc.; Victor R. Schmidt, Queen City Textile Corp.; Milton S. Erlanger, B.V.D. Corp.; A. H. Bahnson, Washington Mills Co.; W. A. Burkey, Burkey Underwear Co.; Fred H. O'Hara, Norwich Knitting Co.; J. Lee Lesher, Bestok Underwear Co.; Ralph E. Hoffman, E-Cut Knitting Mills, and Arthur M. Reis, Jr., Robert Reis & Co.

Others elected to the committee: R. A. Smith, Wilson Bros.; J. A. Goldfarb, Union Underwear Co.; P. H. Hanes, P. H. Hanes Knitting Co.; E. N. Winship, Winship-Boit Co.; F. R. Riesenberger, Van Raalte Co., Inc.; Ralph Heilbroner, Holeproof Hosiery Co.; Grover C. Good, Globe Knitting Works; George T. Jarvis, Elmira Knitting Mills; H. B. Snader, Vanity Fair Mills, Inc.; A. F. Eckert, Duofold, Inc., and Earl W. Dunmore, Utica Knitting Co.

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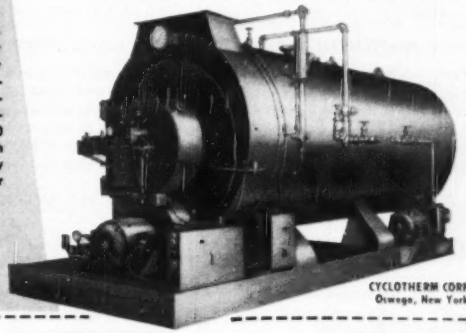

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TRI Organization

The over-all direction of all operational functions of Textile Research Institute, Inc., has been vested in the director of research, Dr. John H. Dillon, it was announced by A. G. Ashcroft, president of the Institute.

Certain functions of the New York office will be transferred to Princeton. The publications department will continue in New York under Julian S. Jacobs as director, who also will be in charge of the New York office. Financial control and final policy decisions will remain with the elected officers and members of the board of directors.

"This move," said Mr. Ashcroft, "is in line with the Institute's policy of gradual development of the organization to keep pace with its steady growth and increase in scope of activities. In addition to organizational soundness, the plan offers definite possibilities of improved efficiency and economy of operations."

Alert Selling Pays Dividends

Knitted garments for sports, vacations, and casual use, are reported to have done as well thus far this year as they did a year ago. This is saying a great deal, because in 1949 the sources for knitted cotton polo shirts, Basque shirts, T-shirts, etc., experienced the best demand in their history.

If the weather is favorable over the next couple of months, it is asserted, a new high record of sales may result for these items. In some quarters it is claimed a permanently new market for such merchandise has been established.

Authorities in the knitwear field admit that in one form or another and under various trade-names similar garments have been used for years. However, present popularity of the T-shirt, for example, is traced back by some to the wartime experiences of millions of young men to whom the government issued supplies of lightweight, cotton, knitted garments that could be used for a great variety of purposes.

Since the war, knitters—noting the preference of veterans for such garments—developed a considerable array of similar constructions that were intended to give more of a fashion and style slant. This new merchandise has been offered at retail in a great range of prices. It can be sold in almost any sort of retail store, but mostly in those depending on rapid turnover.

Knitters agree that this illustrates how alert planning can foster new outlets. Entering into it, they concede, are different styling, colors, sales techniques, proper pricing, etc., singly and combined. As recently as five years ago, this market was thought by a good many to have been lost to synthetics. Exploitation also has been due in some measure to underwear mills seeking different outlets for their "know how" in the knitwear industry.

REDUCE "ENDS-DOWN"—CUT COSTS

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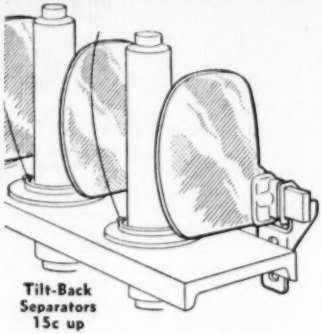
ALUMINUM ALLOY SEPARATOR SHIELDS

Why burden your frames—and your overhead—with heavy, old-fashioned iron separator shields? Whitehead Permalite Shields are made of a special aluminum alloy—strong as steel but many times lighter. They mount right on the ring rail and can be flipped back for doffing . . . And with all their superiority, they cost no more!

EASY TO INSTALL Simply drill and tap ring rail. We supply the shields and bar drilled to your gauge and ring count, together with proper support hangers and all screws and washers.



Tilt-Back Separators 15c up

Stainless Steel Available for Rayon Spinning

EACH JOB ENGINEERED When ordering specify rail width, thickness of back flange, gauge and number of rings in each rail on one side only, as 24-22-22-22-24.

ONLY WHITEHEAD PERMALITE SHIELDS OFFER THESE ADVANTAGES

- Fewer ends down: some mills report 27% less
- Use of lighter travelers which reduce power costs, wear of rings and travelers
- Solid polished blades (not slotted) which cause less wear on yarn, collect less lint and fly, resulting in smoother yarn
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- Reduction of live weight—from as much as 300 lbs in old slotted steel shield assemblies to as little as 35 lbs per frame
- No attention after installation

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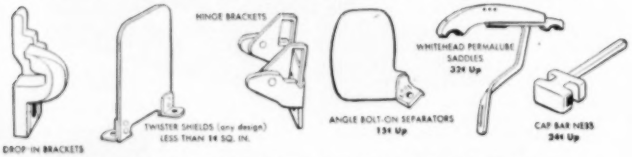
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WHITEHEAD PERMALUBE SADDLES 32¢ Up
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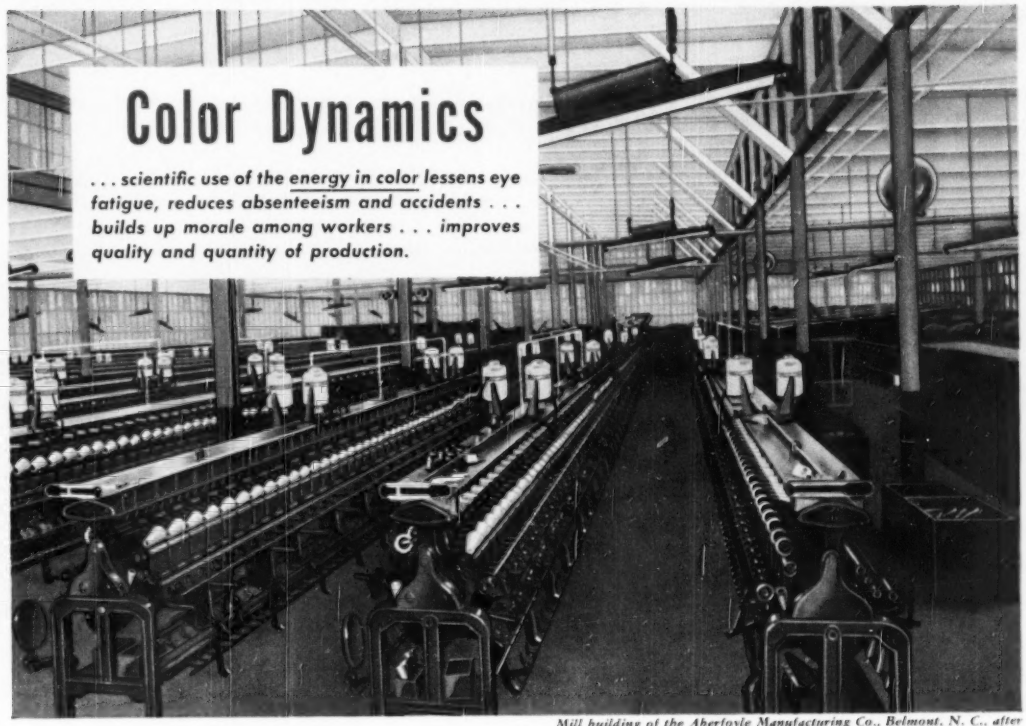
Northern Representative
Matthews Equipment Co., 93A Broadway, Providence, R. I.



Color Dynamics

. . . scientific use of the energy in color lessens eye fatigue, reduces absenteeism and accidents . . . builds up morale among workers . . . improves quality and quantity of production.

Mill building of the Aberfoyle Manufacturing Co., Belmont, N. C., after it was repainted according to the principles of COLOR DYNAMICS.

Pittsburgh's New Painting System Benefits Workers and Management Alike in Aberfoyle Mills' Plant!

IT IS not surprising that production executives and workers alike have expressed great interest in Pittsburgh's COLOR DYNAMICS.

This new method of painting is based upon the scientific fact that the *energy in color* has a definite influence upon the physical, mental and nervous systems of human beings.

Actual experiences have shown that in plants which utilize Pittsburgh COLOR DYNAMICS both labor and management have benefited. Continuity of employment is increased, efficiency of operation is improved. Quality and quantity of production are maintained at high levels.

Characteristic of the benefits produced by the painting system of COLOR DYNAMICS are the results in the plant of the Aberfoyle Manufacturing Company of Belmont, N. C.

"We painted our mill buildings according to your principles of COLOR DYNAMICS," writes W. H. Crenshaw, plant manager. "Such use of specific colors has many advantages. It is helping us to maintain higher employee morale, a good safety record and efficient, improved production throughout our organization."

Hundreds of plants in many industries have enjoyed similar experiences in recent years. Where these principles have been applied, workers' eye fatigue has been lessened. Absenteeism and the risk of accidents have been reduced. *More work per man-hour and more man-hours per man have resulted.*

You Can Obtain a COLOR DYNAMICS Engineering Study of Your Plant — FREE!

Your plant may need Pittsburgh COLOR DYNAMICS. Why not try this new painting system on a machine or two—or in one department? We'll be glad to make a scientific color engineering study for you FREE and without obligation.

There's a trained color expert at each of our offices located in all principal cities. Call your nearest Pittsburgh Plate Glass Company branch and arrange to have our COLOR DYNAMICS representative see you at your convenience. Or send the coupon below.

SEND FOR A COPY OF THIS BOOK!

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☐ Please send me a FREE copy of your new revised and enlarged Booklet "*Color Dynamics In Industry.*"

☐ Please have your representative call for a Color Dynamics Survey of our properties without obligation on our part.

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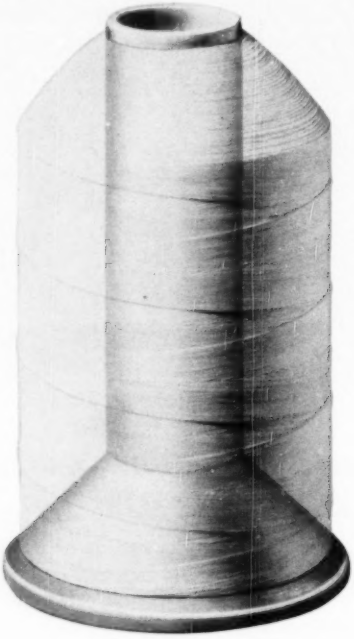
SONOCO

SINGLE HEAD SPOOLS

An Original Sonoco Development

FOR PACKAGING INDUSTRIAL THREAD



Standard with the industry for packaging industrial thread, the SONOCO Single Head Spool features a tapered base that permits the wound package to deliver freely to the sewing machine. It is made in a variety of base diameters and barrel lengths and with colored lacquer tips for identification. Special scoring and surfaces are available to prevent slippage of thread under unusual conditions.

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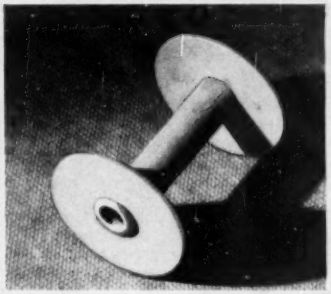
SONOCO PRODUCTS COMPANY

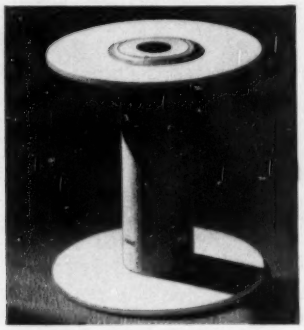
BRANTFORD ONT | HARTSVILLE S. C. | MYSTIC CONN.

DEPENDABLE SOURCE OF SUPPLY

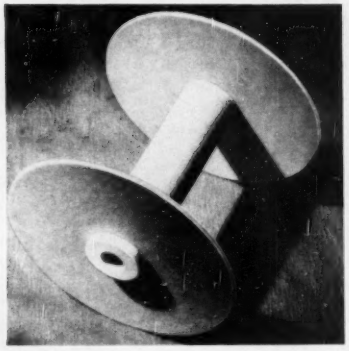
SONOCO .... makes spools to serve a variety of purposes. Shown below are:



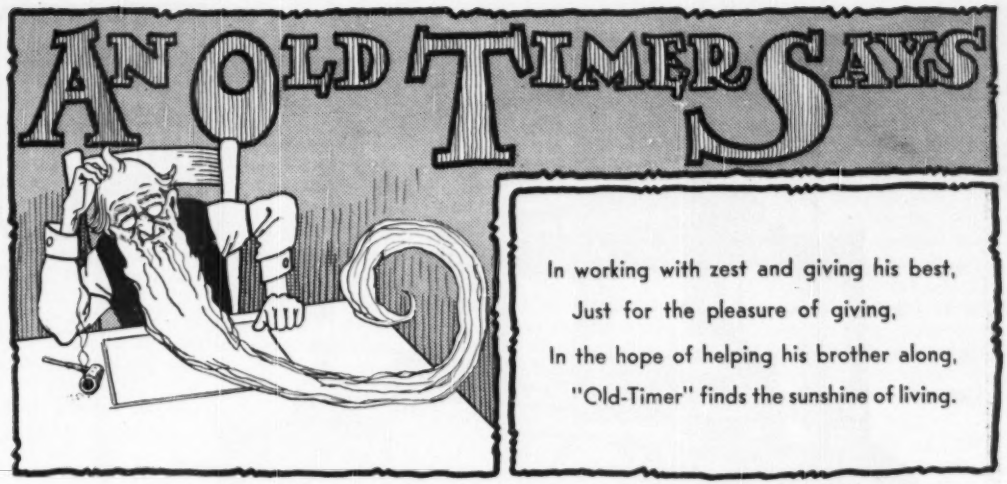
BIAS—FOR WINDING LIGHT PACKAGES OF BIAS BINDING AND NARROW TAPE. CRIMPED END CONSTRUCTION.



F. F. M.—FOR WINDING BRAID, TAPE AND CORD. FEATURES METAL REINFORCED BUSHING.



R. F.—FOR WINDING BRAID, TAPE AND CORD. MADE WITH TREATED FIBRE HEADS AND WOOD BUSHINGS.


AN OLD TIMER SAYS
In working with zest and giving his best,
Just for the pleasure of giving,
In the hope of helping his brother along,
"Old-Timer" finds the sunshine of living.

How to Make Imagination Work

(A continuation of the discussion, "Can You Dream?" which began in the February issue.)

ADDING the word *creative* to Imagination, gentlemen, puts Imagination in the practical category, where it belongs in your mind. That is if you expect to put it to work and profit by its application to your problems of operating textile machinery, and especially in directing your employees.

How many times have you said, "Now why in heck didn't I think of that." Well, brother, the first answer is that you did not use that faculty of Imagination every human being has. Yes, some men have more Imagination than others. However, it is a proved fact that a man *can* develop his Imagination. He can make it grow. It is a talent we all have to some extent and a talent which *all* of us can improve. Just like you can improve any other human talent by exercising it. You, of course, know that you can increase your muscles by lifting a weight a few times a day. This increase in strength will show up so quickly, it is hard to realize so few human beings take advantage of this faculty of the human system.

We hardly believe any kid ever really liked a cigarette, a cigar, or a glass of beer when he first tasted them; but through continued use he acquired the taste. So it is with Imagination or dreaming creatively, the more you practice it the easier it becomes and the more practical your thoughts are.

Dr. Frederick Lyman Wells, Harvard psychologist, once did extended research in an effort to determine the characteristics of a business leader. He selected a group of medium salaried men and another group of men making three times the salary of the medium salaried men.

His tests showed that the men in both groups had about the same foundation of intelligence and business traits. There was, however, one important difference: Every one of the men in the higher salary group had a *practical working* Imagination.

This was no surprise to the business executives he made his report to. It only proved to them what they already believed. So, gentlemen, make a mental note of what OLD-TIMER is trying to pound into your head, which briefly is this plain fact: The man who can visualize a better way to tie on a warp, to lay a lap on a card, to eliminate part of an operative's unproductive work, to enable nine men to do a job which now takes ten men, eliminate a pound of waste thereby converting it into your finished product, yeah, to Imagine such things as they should be, means that they *can* be and you can make them so.

Make Imagination Work

Psychologists say one of the ways to develop your Imagination is to be a good *observer*—then be curious about what you observe. They don't say it exactly as we have expressed it, but by heck that is what they mean, so we just talk plain United States to get the thought to you the way *we* see it. Remember the article where we explained how we made our own

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★ EFFICIENT...

DRAWS IN HEDDLES, DROP WIRES, AND REED IN ONE OPERATION

Many mills today are running such a variety of weaves, patterns, and stripes that the drawing-in operation becomes a major cost item. *Substantial savings* can be made by the use of a Barber-Colman Drawing-In Machine. This machine will handle any plain, fancy, or dobby weave. It draws-in all the heddles, drop wires, and reed in *one* operation — automatically selecting the proper heddle, drop wire, and reed dent for each thread. Any form of skip draw can be handled as easily as straight sequence, and the draw can be made from either a flat sheet or leased warp. The machine is available in a variety of capacities, drawing as many harness and banks of drop wires as required. Variations in size will take care of all standard loom widths. Modern mills of any size can take advantage of the versatility, accuracy, and efficiency of this outstanding machine to effect important savings in what has been a slow and costly hand operation. Consult your Barber-Colman representative for a discussion of possibilities in your own mill.

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • DRAWING-IN MACHINES

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FRAMINGHAM, MASS., U. S. A. GREENVILLE, S. C., U. S. A. MANCHESTER, ENGLAND MUNICH, GERMANY

rules to the men we were teaching common and decimal fractions. Well there is no difference in trying to get a fellow to understand arithmetic or psychology or Imagination—the main problem is to get him to understand what it is all about; therefore, we hope you will be patient with OLD-TIMER in his efforts to get a message over to you about what he believes is a paramount qualification which all operating executives should possess.

We are doing our darndest to prove to you that you can *possess*, you can *acquire*, and you can *improve* your faculties of Imagination. Then if you are too lazy—

Oh! well, we will just keep trying, because we do receive some letters from readers who say they have profited in various ways. Some get promotion, or are enjoying their jobs more, etc.

As an operating executive we believe you have a wider field for improving such things as you have than hoping to create something entirely new. What we are trying to say is that your Imagination does not have to imagine very hard or intensively to find something to improve upon. Gosh! they are all around you—things to improve. Boy, what a broad field you have with your operatives. Had you ever tried to classify them? For example, how many are running their machines which could be classed as A1—how many B and C. And far more important, how many can you class as loyal—how many disloyal—how many on top of the fence?

Your easiest problem, of course, is to get some of those off the fence.

Let Imagination Run Wild

Give old man Imagination a free rein. Just let him go full tilt and he is sure to run into something which will make you stop and think. Then is the time to apply reason and try to work out something definite. With operatives in mind you must realize that what OLD-TIMER classes as mass psychology is the main thought to keep uppermost in your mind because so many people are affected by the same emotions. That fact was forcibly brought to my mind recently when we saw movies of Princess Elizabeth's wedding in London. People, thousands and thousands of them, sat for hours just to see two people drive by in a carriage. Why? Why would thousands of people not only lose a day's work but put themselves to great inconvenience just to see two people drive by in a carriage?

Well, brother, when you find the answer to that one, please wire OLD-TIMER and we will try to be there on the next plane to have you tell us all about it. That is mass psychology, that elusive something about human nature that we all see but no one seems to know exactly what it is. Oftentimes it springs up spontaneously and seemingly from no where, but the operating executive who can create mass psychology among his operatives even in a very small way, is the man who will be outstanding in his managership.

Relax at Times—Your Mind Will Function Better

Sometimes a fellow's mind needs a little relaxation, so here is a story of how children's Imaginations work. How often have you seen your children or your neighbor's children all dressed up in Dad's and Mom's old clothes while *Imagining* they are grown folks.

In this case it was Mrs. Roberts, who had just moved into the neighborhood. When she answered the door bell she saw an eight year old girl all decked out in her mother's large hat—a pair of high heel shoes and a parasol, and holding the hand of her little four year old brother who had on his Dad's old hunting coat which was dragging the ground, and his dad's service cap.

The little girl spoke up, "We are Mr. and Mrs. Brown who have come to call on our new neighbor." Mrs. Roberts, quickly sizing up the situation, invited the kids in for tea. As she was coming out of the kitchen with the tea and cakes the children were just going out of the front door.

"Won't you stay for tea," called

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Model 3-408-16 caster with thread guards, designed especially for the needs of the Textile Industry.
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HOW ANDERSON SHIELDS INCREASE SPINNING ROOM EFFICIENCY

Spinning rooms using Anderson Shields save time and money, and prevent disruption when unnecessary breaking, chipping, and splitting of bobbins and spools is avoided. In a year's time these items alone can amount to a surprising sum . . . Insist on Anderson and get the best protection metal shields afford . . . Watch your spinning room efficiency increase!

TEXTILE SHIELD CO., INC.

Metal Protection for Wood Turnings

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JACOBS LOOM NECESSITIES

SOUTHERN Division Charlotte, N. C.
The Bullard Clark Company
E. H. JACOBS
NORTHERN Division Danielson, Conn.

Mrs. Roberts.

"Thanks so much," replied the little girl, "We must hurry back. Mr. Brown has just wet his pants."

Are You a Realist?

Now back to our subject. Some people you know are naturally born realists. A realist will have a heck of a time learning to dream. That is, the kind of dreaming we are discussing. Because a realist wants to think of things as they are or as they were created.

For example: An apple as created by nature will fall to the ground from the tree and spread seeds to start more apple trees, but that ruins the apple for shipping purposes. Therefore Shell Research (Shell Oil Company) comes along and develops a spray for apple trees which holds the apple on the tree until it is ripened to maturity. Now if a realist doesn't believe that is an improvement over an apple tree as nature built it—.

Anyway OLD-TIMER certainly is not a realist; therefore, we will go along with the man who can dream, and bank on that dreamer using his creative Imagination to help us with the myriad of problems we have confronting the textile manufacturing business today.

Did you notice any of the ads Burlington Mills ran in some of the leading magazines? We quote from one ad in "Time," March 15 '48. They picture a power line and say, "Because of that freedom every power line in America leads to a spot where a man made a dream come true." Get that statement: *"Made a dream come true."*

If you are really trying to follow the reasoning expounded in these articles, if you want to profit by applying such reasoning to advancing your ability as a textile operating executive, then do not become confused when thinking of the connection between Imagination and invention.

To say it another way, there is clear cut distinction between Imagination and invention. Let us say that Imagination makes discovery. It gives you the idea; or we should say, an idea is born. Then, and *not until then*, does invention select the plan by which the discovery comes to life.

PERSONAL NOTES

ABOUT MEN YOU KNOW

M. C. Ramm, formerly with the Greensboro Weaving Plant of Burlington Mills Corp., is now plant manager of the R. and A. Gant plant at Burnsville, N. C. Succeeding Mr. Ramm as superintendent at Greensboro is **Leeman Lamarr,** formerly superintendent at Burlington's Hillcrest plant.

H. Paul Bridges succeeds J. A. Talbert, deceased, as superintendent of Cliffside (N. C.) Mills. Mr. Bridges was formerly assistant superintendent.

The Dallas, Ga., division of Whitfield Spinning Co., Inc., will be managed by **Lee Womelsdorf,** secretary-treasurer of the company, according to a recent announcement.

George T. Rankin was recently promoted to assistant superintendent of Gaffney (S. C.) Manufacturing Company.

Bernard M. Cone, an officer of Cone Mills Corp., Greensboro, N. C., for 46 years, has announced his retirement. Herman Cone, president, succeeds him as board chairman.

At its recent annual meeting, the Textile Foundation re-elected **Franklin P. Hobbs** of William Whitman Co. as chairman of its board. This is the twenty-first time Mr. Hobbs has been so honored.

Daniel J. Petruzzi has joined the public relations department of Burlington Mills Corp.

Fred T. Lawson, formerly associated with the Robbins (N. C.) Mills, is now manager of the new Harris plant of Greenwood Mills at Harris Station, S. C. **Guy S. Langford,** formerly with McCormick (S. C.) Spinning Mill, has been named personnel manager.

Frederick A. McAlpine has succeeded Walter J. Briden, deceased, as secretary-treasurer and a director of Sayles Finishing Plants, Inc., Providence, R. I.

Callaway Community Foundation, LaGrange, Ga., has announced the resignation of **Dr. Willis E. Howard** as president.

Announcement has been made of the appointment of **Raymond J. Fontaine** as executive vice-president, treasurer, and general manager of Guerin Mills, Inc., Woonsocket, R. I., and its subsidiary, Ramseur (N. C.) Worsted Mills, Inc.

Lyman B. Frieze, associated with Duplan Corporation since 1926, was made president of the organization at a recent meeting. **E. C. Geier** is now chairman of the board of directors.

William R. Britland of the American Thread Co., Holyoke, Mass., has been transferred to the firm's branch in Clover, S. C. Mr. Britland will be in charge of a pilot plant at Clover.

J. P. Stevens & Co., Inc., has announced the retirement of **Robert E. Henry** as vice-president of the firm. New vice-presidents are **George P. McClenaghan,** manager of the Piedmont, Wallace, and Whitmire plants in South Carolina, and **J. Wilbert Wood,** executive officer of the Industrial Cotton Mills division and general manager of the Aragon plant.

Edward F. Silk has succeeded Everett E. Syms, resigned, as superintendent of the A. D. Juilliard & Co., Inc., woolen mill in Stottville, N. Y. He was formerly assistant superintendent.

Walter B. Hildenbrandt, formerly manager of the now liquidated Pomona Manufacturing Co., is assistant to the vice-president and general manager of Hart Cotton Mills, Inc., Tarboro, N. C.

At a recent meeting of the board of directors, **J. Edward Harris** was elected executive vice-president of Mt. Vernon-Woodberry Mills, Inc. **James W. Easter,** formerly secretary, was made vice-president in charge of sales, and **George P. Spates, Jr.,** was named secretary.

Howard R. Hart has succeeded Julian K. Morrison, deceased, as president of Brighton Mills, Inc., Shannon, Ga.

D. M. Williams has resigned as general manager of Marshall Manufacturing & Processing Co. and Calvine Cotton Mills, Inc., Charlotte, N. C.

James J. Delaney succeeds **James L. Marcus** as president of Aldon Rug

Ends Tedious COUNTING

gives fabric counts

accurately, directly, without eyestrain

FAR SUPERIOR to the slow, old-fashioned method, the new Micro-Line Counter *does away with the tedious work of counting individual threads . . . saves time . . . eliminates the torture of eyestrain . . . prevents errors in count.*

HERE'S WHY! The Micro-Line Counter is a scientific instrument that gives accurate, instantaneous fabric counts—from 40 to 150 per inch—of plain-woven goods such as cottons, sheetings, percales, rayons, nylons, linens, silks and tropical worsteds. It will also give the pick on most twill or satin weaves as well as the wales and courses on tricots and plain knits.

FREE, 4-page folder shows how intense, lens-sharpened moire patterns points to the exact counts . . . gives complete information on how to use this time-and-labor-saving instrument. Send for your copy today.

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Your company name, personalized imprint, trademark, slogan or message can be engraved or heat-stamped on the opposite side of the Micro-Line Counter or on the fine-grained black leather case.

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44 West 18 Street, New York 11, N.Y.

Gentlemen: Without obligation, please send me free illustrated folder giving full information and prices on the Micro-Line Counter.

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COMPANY_____

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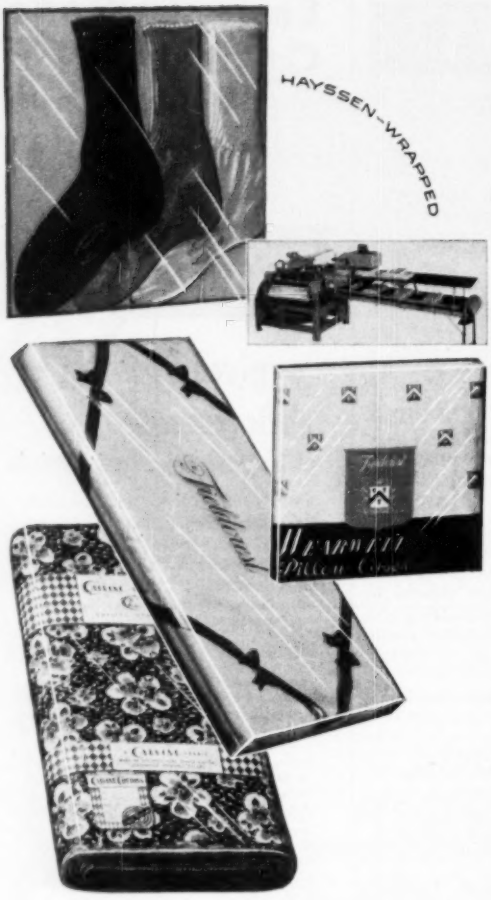

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Fully automatic—it replaces costly hand wrapping.

Provides exact registration of printed overwraps.

Operates quietly at a high production rate.

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ELECTRIC EYE WRAPPING MACHINES

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BAN CORROSION WITH STAINLESS BIRTANKS

Stainless steel Birtanks are the best answer to the problem of corrosion in processing or storage. The unequalled resistance of stainless to attack, freedom from maintenance cost, and unlimited life make it far more economical in the long run.

Solid stainless and stainless clad steels are now obtainable and Birtank has the trained technical staff and ample facilities for fabricating vessels of any type or size.

Experienced engineering staff; early deliveries. Tell us your problems and write for quotations.

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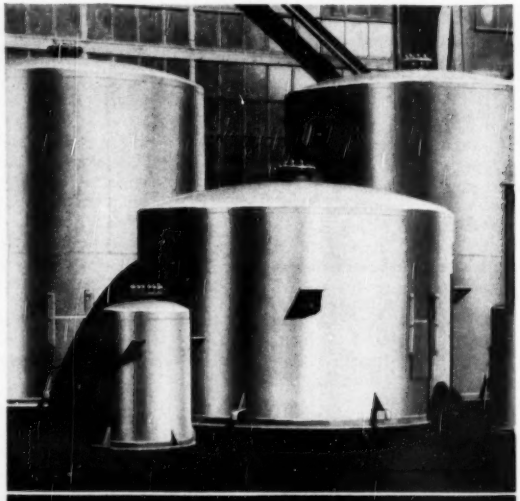
Stainless steel pulping vessels, fabricated by Birtank for a leading soap manufacturer.



Specialists IN STAINLESS STEEL FABRICATION

Mills, Inc., New York, N. Y. He was at one time associated with Bigelow-Sanford Carpet Co. Mr. Marcus has been made chairman of the board of directors.

At the annual meeting of the Financial Group of The Association of Cotton Textile Merchants, **William G. Lipsey** was elected chairman to succeed Herman M. Zimmerman. Mr. Lipsey is treasurer of Turner Halsey Co., New York, N. Y.

Edward C. Pfeffer, Jr., associated with Cluett, Peabody & Co., Inc., since 1942, has been elected vice-president in charge of research. **Jerome C. Braden** was made secretary-treasurer.

Dr. Joel Lindberg, director of the Institute for Applied Textile Research in Gothenburg, Sweden, recently completed a two-month visit as guest scientist in the Textile Research Institute laboratories, Princeton, N. J.

The Philadelphia Textile Institute, Germantown, Pa., recently created two new administrative posts in its research department. **Percival Theel** has been appointed coordinator of research, and **B. Russell Koenig** has been named assistant coordinator. **William H. Hughes** succeeds Prof. Theel as head of the chemistry and dyeing department.

Ralph V. Blackwood, formerly with Joseph Bancroft and Sons Co., has been made superintendent of manufacturing at Mooresville (N. C.) Mills.

Robert Posey has been placed in charge of quality control at Beattie Manufacturing Co., Little Falls, N. J.

James C. Walsh has been appointed assistant to M. C. Mumford, general manager of Fieldcrest Mills. Mr. Walsh, who formerly was assistant comptroller of Marshall Field & Co., will be located at 88 Worth Street, New York, N. Y.

Neal Truslow, formerly with Chicopee Manufacturing Corp., is now supervisor of product development for the textile division development department of U. S. Rubber Co. His headquarters will be at the company's new research laboratories in Winnsboro, S. C.

T. B. Bullock, Jr., Hoover Hosiery Co., Concord, N. C., has taken over the accounts of his father, T. B. Bullock, Sr., who recently died.

John A. Williams, formerly vice-president, has succeeded the late John Roberts Mitchell as president of Mitchell-Bissell Co., Trenton, N. J.

Duncan Rogers has been elected to the post of vice-president and director of sales of Pepperell Manufacturing Co., Boston, Mass., succeeding **Donald B. Tansill** who has resigned to become vice-president of Burlington Mills Corp. Mr. Rogers was formerly general sales manager.

Henry K. Torpey succeeds **W. J. Buck** as president of the Textile Technical Federation of Canada. Mr. Torpey is assistant superintendent of Dominion Textile Co., Ltd., Montmorency Falls, Que. At the same meeting **Roger J. LaBrecque,** Acton Vale (Que.) Silk Mills, Ltd., and **C. V. Grantham,** W. J. Westaway Co., Ltd., Hamilton, Ont., were elected vice-presidents. **J. A. Dixon,** Courtaulds (Canada) Ltd., Montreal, became secretary, and **Harvey M. Smith,** Mohawk Mills, Ltd., Hamilton, Ont., was elected treasurer.

Arthur Reed is now superintendent at Vernon Textile Co., Philadelphia, Pa. He succeeded **Ralph Dunford,** who has gone with Graichen Fabrics, Inc., in Puerto Rico.

Charlie C. Butler, formerly night superintendent at the Mooresville (N. C.) Mills, is now superintendent of the new filament rayon plant of Morgan Cotton Mills, Laurinburg, N. C.

Milton Davis, of Yorkshire Knitting Co., Brooklyn, N. Y., succeeds **Bertram E. Green,** Revere Knitting Mills, as president of the National Knitted Outerwear Association. Mr. Green was elected a vice-president of the organization.

John A. Donaldson has succeeded Mark Dunnell, retired, as treasurer of Bigelow-Sanford Carpet Co., Thompsonville, Conn.

Edward C. Lafferty has left Warwick Mills to become plant manager of the Greenville (N. H.) Mills, Inc.

Earl F. Potter is now overseer of dry finishing at the Wood Worsted Mill of the American Woolen Mills, Lawrence, Mass.

Francis W. White, formerly vice-president, has been elected president of American Woolen Co., succeeding the late Moses Pendleton.

Maurice Phillips, formerly with C. H. DeLand, has become associated with Botany Mills, Inc., Passaic, N. J.

(Obituaries on page 211)

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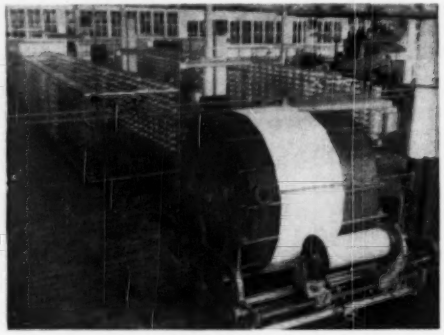

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OVER-END MAGAZINE CONE CREEL

—for acetates, viscose, nylon, and other synthetic fibers, is made with three types of tensions:

1) Washer type. Employs double set of washers. Gives perfect tension for fiber yarns, as well as to fine denier flat yarns.

2) Pulley type. Retarding action obtained by friction applied to rotating members—not to the yarn.

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HIGH-SPEED HORIZONTAL WARPER

Makes warps of rayon, acetate, and other synthetic yarns at speeds up to 500 yards a minute. Exceptionally heavy construction. Takes up to 28" beams at beaming end. Back lash eliminated. Heavy-duty, multi-speed motor. Static eliminator.

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Send for folders giving all particulars of these and other Sipp-Eastwood machines for efficient warping of synthetic yarns.

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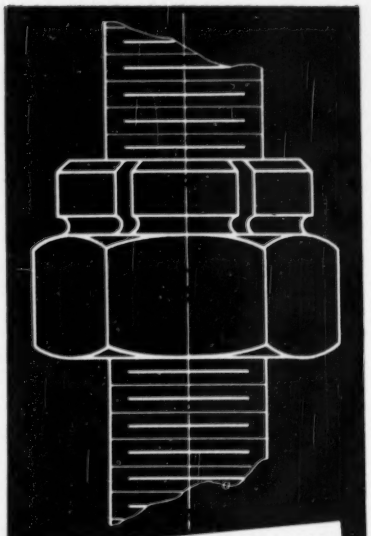

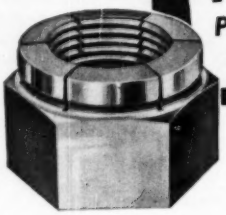

The one-piece, all-metal FLEXLOC is both a Stop and a Lock Nut, due to its resilient segments which Lock *positively*, anywhere on a threaded member . . . even under extreme vibration.

Torque is unusually uniform and kept within a few inch pounds. 550° F. temperature has no terrors for the all-metal FLEXLOC. The FLEXLOC design is very adaptable as evidenced by a steadily increasing number of highly unorthodox applications. "Thin" and "Regular" types; NC and NF threads. Officially approved by many U. S. depts., bureaus, etc.

For further information, write for Bulletin 619-A.

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It's just the machine for large areas. It scrubs and squeegees floors. One operator does both jobs with this remarkable two-in-one machine. Clean water is fed from one tank upon the soaped floor, the 19" diameter revolving brush scrubs it thoroughly. Then a rubber squeegee mops up the dirty water which is vacuum pumped into a second tank.
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Obituaries

Joseph K. Cobert, retired Canadian mill executive, died in Morristown, Tenn., recently. Mr. Cobert was the father of J. C. Cobert, superintendent of Hugh Grey Hosiery Co., Concord, N. C.

B. M. Jenkins, 60, an executive of Pine Hosiery Mills, Star, N. C., died in April of a heart attack.

G. G. Allen, retired superintendent of Cannon Mills Plant No. 1, Kannapolis, N. C., died recently.

Edward A. Sheridan, 58, died of a heart attack in Seekonk, Mass. He was superintendent of Vesta Underwear Co., Pawtucket, R. I.

Arthur Coleman Mobley, Sr., vice-president and secretary of Walton Cotton Mill, Monroe, Ga., died April 24 at the age of 63.

Moses Pendleton, 65, died suddenly on April 23 while visiting his son in New Hampshire. Mr. Pendleton was president of the American Woolen Co., which he joined in 1903.

Following a brief illness, **John Roberts Mitchell,** president of Mitchell-Bissell Co. for the past 48 years, died on March 28.

Dr. Frederick T. Peirce, director of research in the School of Textiles at N. C. State College for several years prior to his resignation in 1948, died on April 11 at his home in Sydney, Australia.

At the age of 80, **George A. Post,** of Bronxville, N. Y., died suddenly in Beaumont, Tex. Before his retirement, Mr. Post was president and owner of Post & Sheldon Corp., silk manufacturers.

L. D. Holland, 46, died on April 14. Mr. Holland was assistant to the president and a member of the board of directors of E. F. Houghton & Co., Philadelphia, Pa.

At the age of 73, **Richard L. Moyle,** Johnstown, N. Y., died. Before his retirement a year ago Mr. Moyle was vice-president of the Kendall Mills Division, Kendall Co.

Irving Southword, Andover, Mass., died recently at the age of 70. Before his retirement in 1940, Mr. Southword was cotton expert with Pacific Mills, and was a former president of the National Association of Cotton Manufacturers.

Charles C. Wood, 80, president of Knox Woolen Co., died suddenly at his home in Camden, Me.

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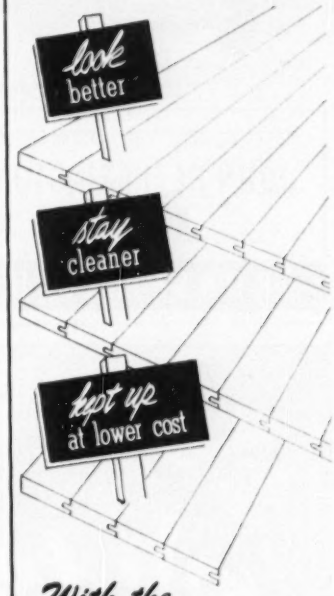

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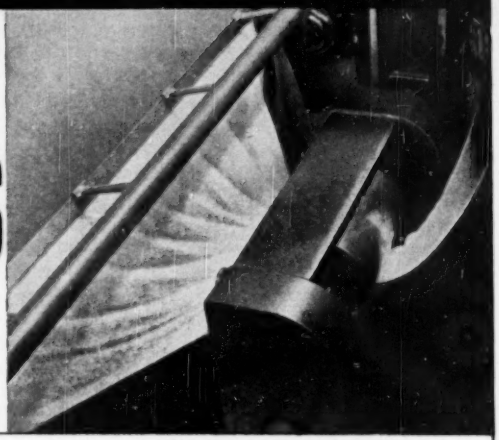

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This service is restricted to those engaged in operation and management of textile industries

First Listing of New Publications

6-1. Fire Retardant—New technical Bulletin No. P-28 describing Monsanto Fire Retardant B is now available. Methods of Application, results obtained and Army Quartermaster fire resistant tests for textiles fully described. Monsanto Chemical Co., Phosphate Div., St. Louis 4, Mo.

6-2. Planned Lighting. The latest concepts of planned lighting, the benefits to be gained and the methods employed to put such a program into effect. Economics, Program Development and Equipment selection are the three major parts fully discussed. Benjamin Electric Mfg. Co., Des Plaines, Ill.

6-3. Slack Washer. Literature available describing this stainless steel 6 to 12 compartment washer for use in high speed continuous textile processing installations. The Wiesner-Rapp Co., 1600 Seneca St., Buffalo, N. Y.

6-4. Belt Power Transmission. "How to Select, Install and Maintain Modern Leather Belting" is the title of a new illustrated booklet designed to show the belting user how to get efficient power transmitting performance, with minimum maintenance and maximum service life. Southern Belting Co., Atlanta, Ga.

6-5. Textile Printing Counters. Catalog No. 75 illustrating and describing Productimeter Yardage and Printing Counters — visual printed records of machine production. Specifications, applications and operation discussed. Durant Mfg. Co., 1929 North Buffum St., Milwaukee 1, Wis.

6-6. Flexible Tubing. Catalog describing Spiratube, the new flexible tubing for ventilation and products conveying. Conveying cotton, wool and synthetic fibers; dye vat ventilation; spot heating-cooling; carding, vacuum cleaning and many other uses discussed. Flexible Tubing Corp., Branford, Conn.

6-7. Compressed Air Power. New booklet containing extensive basic reference data on compressed air and gas power outlines how air is compressed, the machine employed in compressing air and gas, and the basic principles of the utilization of air power. Compressed Air and Gas Institute, 1410 Terminal Tower, Cleveland, Ohio.

6-8. Textile Preparatory Equipment. Brochure describing types of machines used: Scouring, Extracting and Drying; opening, picking, dusting and blending; yarn handling; aprons, conveyors and condensers—each type illustrated. C. G. Sargent's Sons Corp., Graniteville, Mass.

6-9. Static Elimination, Bulletin No. 72 describes static elimination equipment, with illustration of typical installations — mills now using these eliminators. Chapman Electric Neutralizer Co., Portland 6, Maine.

6-10. Turbine Heater. Bulletin describing the wing turbine driven unit heater. Complete details of design and construction with engineering data and dimensions. L. J. Wing Mfg. Co., Linden, N. J.

6-11. Resorcinol. Technical bulletin includes physical properties, crystallographic, spectral and thermo-dynamic data — also solubility in common liquids. Sodium hydroxide-resorcinol solution decreases contraction of cotton yarn —fully discussed. Koppers Co., Inc., Chemical Div., Pittsburgh, Pa.

6-12. Stainless Steel Fabrication, Bulletin describing "custom tailoring of stainless steel"—many illustrated uses of stainless products for the textile industry. Services of engineering department described. Sims Metal Works, West Point, Ga.

6-13. Industrial Controls. Catalog presents over 100 different models of non-indicating electric, electronic and pneumatic controllers that have many uses in textiles. Important additions to the previous line are shwn for the first time. Minneapolis-Honeywell Regulator Co., Industrial Div., Philadelphia, Pa.

6-14. New Era Spindles. Brochure with check list describing advantages of New Era Spindles. Invites check list comparison with your present spindles—servicing or regreasing unit described. Saco-Lowell Shops, 60 Batterymarch St., Boston 10, Mass.

6-15. Differential Pressure Transformer. Widely used for measuring differential pressures for indicating, recording and controlling the rate of flow of steam, gas or liquid fuel, water and other materials, illustrated and described in Bulletin No. 2250. Hagan Corp., Hagan Bldg., Pittsburgh, Pa.

6-16. Packaging Aids. A guide book, "101 Ways to Get Better Packaging," is compact reference on latest developments in paper and rigid transparent packaging. Unique "Quiz Chart" simplifies appraising present packages, assists in planning new ones. W. C. Ritchie & Co., 8863 South Baltimore Ave., Chicago 17, Ill.

6-17. Fatty Acids. Catalog of specifications on fatty acids with data charts showing composition of fats and oils, color standards comparator and temperature conversion tables. W. C. Hardesty Co., Inc., 41 E. 42nd St., New York 17, N. Y.

6-18. Fibre Glass Heaters. Booklet describing the new Fibre Glass Super Heater—uses and uniform heating qualities described, economics and full control in a 600° range of temperatures discussed. Sill Industries, 51 Madison Ave., New York 10, N. Y.

6-19. Bleaching Range. New booklet describing Greenville Steel's new Dupont system "800-OW"—for small production open width bleaching. This one or two stage continuous range is described as being perfect for large plant specialty bleaching, minimum floor space, performs as large range except at slower cloth speeds. Fully described, specifications and cutaway diagrams. Greenville Steel and Foundry Co., Greenville, S. C.

6-20. Air Free Cleaner. Brochure describing how the Thornburg Air Free Cleaner, for cetton and other fibers, improves the quality of machine picked cotton and eliminates dirt which would have to be removed by picker room or cards. Specifications given. Thornburg Machine Works, Inc., Dallas, N. C.

6-21. Rubber Belting. New catalog section on rubber transmission belting is available showing various types of belting, recommended uses and specifications. Method outlined for making belts endless by the Plylock belt joint, which is now widely used in many industries. B. F. Goodrich Co., Akron, Ohio.

Cornelia Plant, Lumite Division, Chicopee Manufacturing Corp.

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Cluett, Peabody & Co., Inc.
Crompton & Co.
Crystal Springs Bleachery
Davenport Hosiery Mills
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Peerless Woolen Mills
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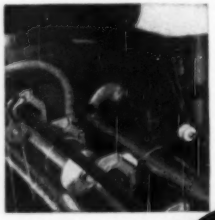

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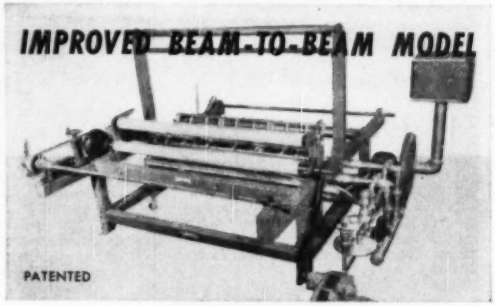

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GENERAL ECONOMIC, MANAGEMENT . . .

4. HOW FACTORING CAN INCREASE PROFITS—Describes how factoring works out in keeping clients' capital liquid and attitude of factor toward checking credits, including typical balance sheet.—COMMERCIAL FACTORS CORP., New York City.

5. FACTORING AND FINANCING — Illustrated booklet on how factoring works, cost and credit information.—TEXTILE BANKING COMPANY, New York, N. Y.

8. "WASTE REDUCTION AND CONTROL"—19-page illustrated booklet giving primary waste factors; how to calculate cost of departmental waste; actual waste figures from mills; contains survey of waste practices.— SOUTHEASTERN ENGINEERING CO., West Point, Ga.

10. "LABOR AND MANAGEMENT BENEFIT BY INDUSTRIAL ENGINEERING PRINCIPLES"—8-page illustrated folder outlining principles of industrial engineering as they apply to textiles.—AMERICAN ASSOCIATED CONSULTANTS, INC., New York, N. Y.

11. FLETCHER JUNIOR "SUPER-SELF-BALANCING" EXTRACTOR—Illustrated folder describing this new extractor with the highly efficient self-balancing arrangement which uses steel springs instead of rubber buffers.—FLETCHER WORKS, INC., Philadelphia, Pa.

12. CONDENSED LISTINGS—8 page pocket sized booklet listing by plant flow the machinery and mill supplies available. Designed to help purchaser in grouping his orders to greatest advantage.—ATKINSON, HASERICK & CO., Boston, Mass.

13. BROCHURE describing financial service to speed turnover of working capital; credit service for sales expansion and credit loss elimination.—WILLIAM IRLIN & CO., INC., New York, N. Y.

14. TEXTILE WEIGHT CONTROL—Forms 2009 and 2010, showing how Toledo Printweight weight records cut costs by eliminating human errors at the scales. Special purpose scales for the textile industry fully discussed.—TOLEDO SCALE CO., Toledo, Ohio.

16. TEXTILE RESEARCH — Booklet describing Research Department's commercial scale facilities for cotton spinning, worsted spinning, etc. Explains organization and functions of Department.—AMERICAN VISCOSE CORP., SYLVANIA DIV., New York, N. Y.

PLANT AND PLANT MAINTENANCE . . .

102. "TANK TALK"—Sixteen page booklet of illustrations showing various types of elevated steel tanks constructed and erected by manufacturers as well as stand pipes, reservoirs, storage and high pressure vessels, cylinders, along with helpful technical data. Also a list of what a few of the cotton mills, etc., said.—R. D. COLE MANUFACTURING COMPANY, Newnan, Ga.

103. HUMIDIFICATION, EVAPORATIVE COOLING—Bulletins available displaying AMCO automatic selfcleaning atomizers, controls, and evaporative cooling equipment.—AMERICAN MOISTENING CO., Providence, R. I.

107. FINNELL SCRUBBERS — Illustrated leaflets describing and giving specifications for the new Finnell floor scrubbing machines.—FINNELL SYSTEM, INC., Elkhart, Ind.

108. MAPLE FLOORING — Booklet describing finishing of Northern Hard Maple Flooring—list of M.F.M.A.-approved heavy-duty floor finishes. — MAPLE FLOORING MANUFACTURERS ASSOCIATION, Oshkosh, Wis.

110. BASIC TOOLS FOR MAINTENANCE—Two-page brochure covering the uses of the Kent Wet Scrubber and Kent Electric Floor Machine; Dry Suction Machine; D-20 Dry Scrubber and Illustrating them.—THE KENT COMPANY, INC., 274 Canal St., Rome, N. Y.

112. TEXTILE TRUCKS—Brochure describing vulcanized Fibre textile trucks, engineered by materials handling experts. Types fully discussed. — J. C. PADDOCK CO., Spartanburg, S. C.

115. ATOMIZER HUMIDIFIER — Recent issue of "Parks' Parables" on Turbomatic self-cleaning humidifiers, and automatic regulation. — PARKS-CRAMER CO., Fitchburg, Mass., and Charlotte, N. C.

118. "PARKS PARABLES" — Recent issue on Parks Turbo Traveling Cleaners for spinning, winding and warping. Type C.T.C. "Up Draft" cleaners keeps overhead and ceilings free from fly and lint.—PARKS-CRAMER CO., Fitchburg, Mass.

119. MOPPING EQUIPMENT—Complete catalog and circulars containing information on the many sizes and styles that can be had.—S. C. LAWLOR CO., Chicago, Ill.

135. SAFETY COLOR CODE—How six standard colors can be used to reduce hazards, cut down accidents.—E. I. DU PONT DE NEMOURS & CO., INC., Finishes Division, C44, Wilmington, Dela.

138. MAGNESIUM IN THE TEXTILE INDUSTRY—Illustrated booklet on properties of magnesium for spinning, twisting, winding, knitting machines, looms, beams, spools, bobbins.—ALUMINUM CO. OF AMERICA, Pittsburgh, Pa.

150. RIHCO HUMIDIFIERS AND COOLING SYSTEMS—Bulletin describes new atomizers with construction lessening air consumption in humidifier systems, evaporative cooling systems. — ALDRICH MACHINE WORKS, Greenwood, S. C.

151. INDUSTRIAL BRUSHES—Illustrated Booklet of industrial brushes featuring textile usage on shears, printing machines—also flock, raising and cylinder brushes.—M. W. JENKINS' SONS, INC., Cedar Grove, N. J.

152. AIR CONDITIONING FOR THE TEXTILE INDUSTRY—40-page illustrated book covering air conditioning from humidity control to complete refrigerated conditioning with installations, charts, covering ABC's of cooling textile mills.—CARRIER CORP., Syracuse, N. Y.

162. MODERN METHODS OF TEXTILE FLOOR MAINTENANCE—Illustrated treatise on the history of floor cleaning in textile plants and a detailed description of new methods for reducing floor cleaning costs as well as preserving textile mill floors.—G. H. TENNANT COMPANY, Minneapolis 11, Minn.

163. LAWLOR FLOOR MACHINES — Illustrated pamphlet containing specifications and describes All-Purpose Floor Machine.—THE SELIG COMPANY, Atlanta, Ga.

164. ECONOMY IN DRY SCRUBBING—Booklet describes Floorseal—Floritone "dry" maintenance system—reduces consumption of seal and steel wool.—THE SELIG CO., Atlanta, Ga.

170. WHY IT PAYS TO ANCHOR YOUR TEXTILE MACHINES WITH UNISORB — Illustrated booklet discussing control of vibration and noise and how UNISORB reduces maintenance costs.—THE FELTERS CO., Boston, Mass.

172. VENTILATING FANS — Bulletin 3339 gives facts on Buffalo Ventilating Fans. — BUFFALO FORGE CO., Buffalo, N. Y.

179. BETTER WAYS — Form 2020, condensed catalog of standard and special model Toledo Industrial Scales that are being used in receiving, shipping, and production operations by all industries including the textile field.—TOLEDO SCALE CO., Toledo, Ohio.

185. WHERE ARE YOUR FLOORS?—This piece of literature covers the various sizes of Kent floor machines which are available for polishing, waxing, buffing, scrubbing, steel wooling and light sanding.—THE KENT COMPANY, INC., 274 Canal Street Rome, N. Y.

POWER TRANSMISSION, MOTORS, BELTING, LUBRICATION . . .

204. G-E MOTORS—Bulletin GEA-5338 contains information on the new line of life-time lubricated unit-bearing FHP motors.—GENERAL ELECTRIC COMPANY, Schenectady 5, N. Y.

205. AUTOMATIC PRODUCTION CONTROL — Bulletin GN-487 on automatic speed control of many machines and processes through Variable Speed Equipment with mechanical and hydraulic automatic controls. Contains many illustrations, drawings and complete description of many applications.—REEVES PULLEY COMPANY, Columbus, Ind.

206. LOOM MOTOR BULLETIN—The new design of this ball bearing motor is claimed to represent an advance in the design of loom motors fully discussed.—THE LOUIS ALLIS CO., Milwaukee, Wisconsin.

208. LIVE TRACTION BELTING—The romantic story of leather and how its peculiar, inherent characteristics work for you.—SOUTHERN BELTING CO., INC., Atlanta, Ga.

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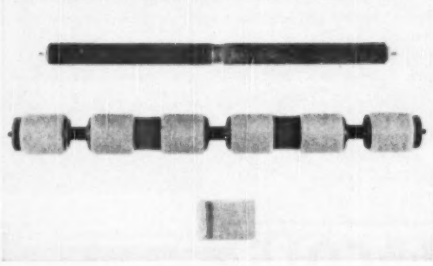

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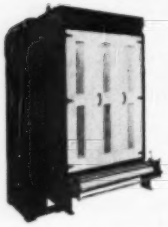

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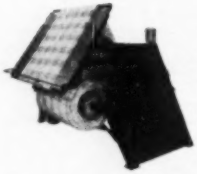

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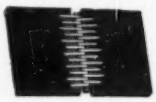

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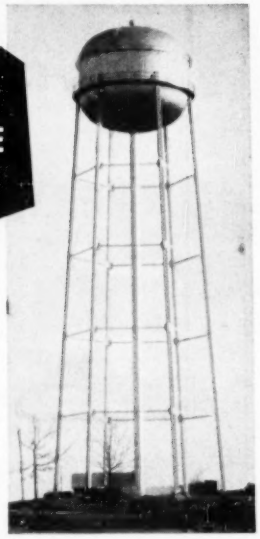

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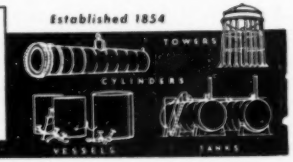

211. JOHNSON BRONZE CATALOGUE NO. 480—Shows over 850 sizes of cast bronze bushings, 500 sizes of UNIVERSAL Bronze Bars and over 300 Electric Motor Bearings. — JOHNSON BRONZE COMPANY, New Castle, Penna.

212. GATES TEXTILT ACCESSORIES — Showing the increased efficiency and economy to be secured through the use of Gates cone belts, evener belts, card bands and loom binder cushions.—THE GATES RUBBER COMPANY, Denver, Colo.

213. ELECTRICAL SPECIALISTS — Catalog No. SS63, 64 pages, lists manual and magnetic motor control and accessories, safety switches, Multi-Breakers and electrical specialties.—CUTLER-HAMMER, INC., 361 N. 12th St., Milwaukee 1, Wis.

215. INCREASE PRODUCTION, CUT MAINTENANCE—New four-page booklet describes oilers, fuses, fuse pullers, "Kliplok" clamps for fuse clips and test clamps.—THICO FUSE MFG. CO., Milwaukee 12, Wis.

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219. ROLLER CHAINS & SPROCKETS — Data Book No. 1957-A describes the Link-Belt Silverlink precision steel roller chain. Can be used on short centers at high ratios; can be applied to small fractional horsepower machines or to units involving more than a thousand horsepower. — LINK-BELT COMPANY, 307 N. Michigan Ave., Chicago, Ill.

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263. NEEDLE ROLLER BEARING—Catalog Engineering and Application Data Edition 32 contains full data on selection of proper Needle Roller Bearings and outlines uses of such in various commodities including textile uses, types, installations, lubrication, etc. — TORRINGTON COMPANY, Torrington, Conn.

264. NEW DEPARTURE SHOP MANUAL—Illustrated catalog showing ball bearing mounting and maintenance practice. Covers storage, cleaning lubrication, types of bearings.—NEW DEPARTURE DIV., GENERAL MOTORS CORP., Bristol, Conn.

265. INTERCHANGEABLE BALL BEARING FOR REPLACEMENT—Charts showing numbers used by manufacturers to identify bearing characteristics, also information on specifications.—NEW DEPARTURE DIV., GENERAL MOTORS CORP., Bristol, Conn.

271. CARDING, SPINNING AND WEAVING LUBRICATION—Informative bulletin describing advantages of NON-FLUID OIL over ordinary lubricants for the lubrication of carding, spinning and weaving machinery.—NEW YORK AND NEW JERSEY LUBRICANT CO., New York, N. Y.

275. HYATT ROLLER BEARINGS — A 16-page bulletin giving details of the application of roller bearings to all types of textile machinery.—HYATT BEARINGS DIV., General Motors Corp., Harrison, New Jersey.

278. SPEED CONTROL—Bulletin 20B6051G describes Texrope variable speed drives. — ALLIS-CHALMERS MFG. CO., Milwaukee 2, Wis.

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326. RECORDING VISCOMETERS — Bulletin V-1006R, describing equipment for manual or automatic viscosity control of sizing operations in the textile field.—NORCROSS CORP., Newton, Mass.

324. STROBOTAC—Informative reprint, "Strobotac Boosts Efficiency in Woolen and Synthetic Mills."—GENERAL RADIO CO., Cambridge 39, Mass.

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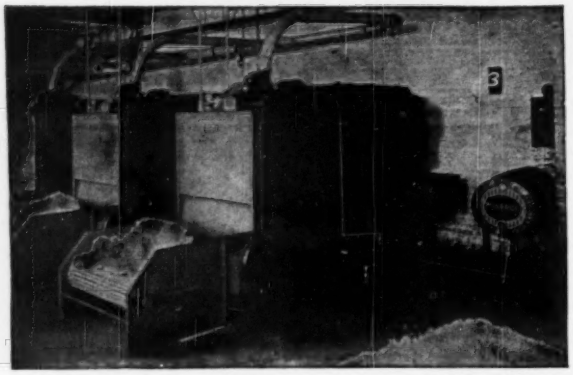

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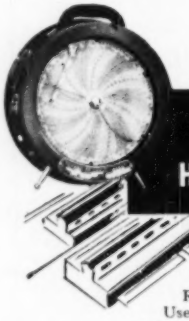

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749. LUPOMIN G—Pamphlet outlines the application of the quaternary ammonium compound recommended for treating natural and synthetic fibres to give soft hand, lubrication, odorless finish, brighter shades, etc.—JACQUES WOLF & CO., Passaic, N. J.

755. LUPOMIN—Leaflet outlines the advantages of the cation active softener which is suitable for use on cotton, linen, silk, wool, synthetic fibres and mixed fabrics. A small percentage of lupomin gives a supple, smooth hand. — JACQUES WOLF & CO., Passaic, New Jersey.

756. TEXTILE SPECIALTIES—Listing and describing a wide and complete range of specialties manufactured and sold by American Cyanamid Company formulated to the latest advances in textile chemistry.—AMERICAN CYANAMID COMPANY, 30 Rockefeller Plaza, New York 20, N. Y.

762. ONYX TECHNICAL DATA SHEETS—Two new data sheets describing the use, advantages, and applications of Onyx Resins B and Onyx Resin 3582.—ONYX OIL & CHEMICAL COMPANY, Jersey City 2, N. J.

765. HOSIERY FINISHES AND FORMULAS—Attractive new booklet describing the Amalgamated line of hosiery finishes and giving numerous finishing formulas.—AMALGAMATED CHEMICAL CORPORATION, Philadelphia 34, Pa.

766. DU PONT PEROXIDE BLEACHING SYSTEMS—New book illustrating and describing this continuous peroxide bleach system. Layouts and other information included.—E. I. DU PONT DE NEMOURS & CO., ELECTROCHEMICAL DEPT., Wilmington, Del.

769. SURFACE TENSION DEPRESSANT — The Booklet, "Mercerizing and Alkamerce—The Ideal Dry Mercerizing Penetrant," introduces a new product which can be used as a wetting agent; a dye leveling agent, a penetrant in package dyeing.—HART PRODUCTS CORP., New York, N. Y.

771. "STARCH STABILIZER" — Folder on Vanesta, a product used for textile sizing and printing, discussing stabilization and the results obtained. —S. T. VANDERBILT CO., New York 17, N. Y.

773. TECHNICAL CHEMICAL DATA SHEETS—Complete set for dyeing, printing and finishing operations, showing major operations, performance and advantages.—ONYX OIL & CHEMICAL CO., Jersey City 2, N. J.

774. ROYCE TEXTILE CHEMICALS—This booklet briefly describes the leading Royce products for textile processing, printing, dyeing and finishing.—ROYCE CHEMICAL COMPANY, Carlton Hill, N. J.

CAUSTIC SODA—Bulletin No. 6, an 80-page technical bulletin, is the latest in Solvay's well-known series. The text is profusely illustrated with photographs, tables, graphs and diagrams.—SOLVAY SALES DIVISION, 40 Rector Street, New York 6, New York.

778. SERIZYME—Bulletin describing the properties and characteristics of Serizyme, a standardized liquid proteolytic enzyme preparation which can solubilize various types of protein substances.—WALLERSTEIN COMPANY, INC., 180 Madison Avenue, New York 16, N. Y.

777. HOSIERY DYEING—Catalog on hosiery dyeing machinery, skein dyeing machinery, package dyeing, extracting and drying equipment. — SMITH, DRUM AND CO., Philadelphia 33, Pa.

KNITTING . . .

800. KNITTING MACHINES — Booklets for hosiery, underwear, and outerwear. Series of illustrated booklets, each devoted to single-type circular knitting machine, full description of machine and product with technical data.—SCOTT AND WILLIAMS, INC., New York, N. Y.

861. THE WILDMAN SINGLE-HEAD FULL-FASHIONED HOSIERY MACHINE — Literature on request from the WILDMAN MFG. CO., Full-Fashioned Division, Norristown, Pa.

803. THE TUBE-TEX FOR TUBULAR KNIT GOODS—Bulletin describing this modern machine which extracts, processes, dries, conditions and folds in one continuous operation, lowering costs, saving labor, power, space and waste.—H. W. BUTTERWORTH & SONS CO., Philadelphia.

806. STATISTICAL SURVEY—Covering the Full-Fashioned Hosiery knitting industry in the United States and Canada.—TEXTILE MACHINE WORKS, Reading, Penn.

809. TEXACO IN THE KNITTING INDUSTRY—Folder on knitting mill lubrication.—THE TEXAS CO., New York, N. Y.

810. ALUMINUM BEAMS—Catalog No. 1-21 describes Hayes magnesium and aluminum specialties for the textile industry. Illustrates this company's beams that are one-third the weight of conventional types.—HAYES INDUSTRIES, INC., Jackson, Mich.

812. CIRCULAR KNITTING MACHINES—Interesting, informative and well illustrated is this six-page folder, just released, which describes this company's small diameter circular knitting machine.—H. BRINTON COMPANY, Philadelphia 34, Pa.

815. THE NEW REINER HIGH SPEED TRICOT MACHINE—168" or 84" knitting widths. A richly illustrated catalog describing its many novel features of construction and performance. — ROBERT REINER, INC., Weehawken, N. J.

816. THE NEW REINER KAYLOOM—A combination Knitting Weaving Loom, featured in an illustrated catalog, showing filler attachment and other important points about this machine. — ROBERT REINER, INC., Weehawken, N. J.

817. AUTOMATIC SELECTIVE STRIPPING MACHINE—Descriptive and illustrative folder, entitled "If It's Stripes, Consult Brinton," now available. Important mechanisms involved in this process are described.—H. BRINTON COMPANY, Philadelphia, Pennsylvania.

818. MILTON LIGHT METAL BEAMS FOR EVERY APPLICATION — Catalog 45-A describing Light Metal Beams, Beam Trolleys in Standard and Special sizes plus Special Purpose Light Metal Textile Equipment.—MILTON MACHINE WORKS, INC., Milton, Pa.

820. VARIABLE STRIPES AND PLAIDS — Booklet describing Supreme Models SA and SA-ROF Stripers for knitting plaids, checks, "floatless" designs and variable stripes.—SUPREME KNITTING MACHINE CO., INC., 103 Johnson Ave., New York.

SEWING MACHINES . . .

915. THE NEW UNION SPECIAL LOCKSTITCH MACHINE—Information on the new model which cuts production time on sewing operations is contained in Bulletin No. 258.—UNION SPECIAL MACHINE CO., Chicago 10, Ill.

916. THE SUPERLOCK—Bulletin 828 describing and illustrating the W & G Superlock overseaming machine.—WILCOX & GIBBS SEWING MACHINE CO., 214 W. 39th St., New York 18, N. Y.

918. FEED-OFF-THE-CAM FELLING MACHINE—Bulletin No. 896. Illustrates and describes the "Feldlock" with Automatic Lubrication, for lap seam felling on shirts, pajamas, shorts, slacks, etc.—WILCOX & GIBBS SEWING MACHINE CO., New York, N. Y.

MATERIALS HANDLING . . .

1001. HOW TO DETERMINE WHERE OVERHEAD MATERIALS HANDLING EQUIPMENT CAN BE USED PROFITABLY — Profusely illustrated. Gives clear, concise understanding of materials handling. Helps you to determine where and what equipment might be used to speed production and increase profits.— CLEVELAND TRAMRAIL DIV., Wickliffe, Ohio.

1002. CATALOG NO. 22—An attractive illustrated catalog describing in detail the Shamrock shipping containers and the new canvas trucks for textile use.—MEESE, INC., Madison, Ind.

1003. CASTERS AND WHEELS—192 page, describing casters and wheels suitable for all types of industrial applications. Every mechanical engineer and purchasing agent should have this.—DARNELL CORP., LTD., Long Beach, Calif.

1004. BASKETS, HAMPERS & TRUCKS—This 24-page catalog is profusely illustrated and contains complete description on the Dandux line, especially designed for the textile industry.—C. R. WICKLIFFE, INC., Daniels, Md.

1006. LANE CANVAS BASKETS—16 page illustrated booklet describing the Lane line of canvas baskets for textile use.—W. T. LANE & BROTHERS, Poughkeepsie, N. Y.

1007. OVERHEAD HANDLING EQUIPMENT — 56 pages of illustrations showing successful applications of monorail systems to meet every kind of handling problem. — THE AMERICAN MONORAIL CO., Cleveland, Ohio.

1008. CASTERS AND WHEELS—An illustrated booklet with complete specifications showing a complete assortment of Cotton Textile Casters.—THE COLSON CORP., Elyria, Ohio.

1009. CONVEYOR KEY BOOK—A guide to production "step-ups" now possible with modern conveying. Shows time-and-effort savings. Well-illustrated with photos showing plant layouts and conveying schemes, how and why different types of conveyors are used for maximum results.—LOGAN COMPANY, INC., Louisville, Ky.

1025. CAB-OPERATED AND FLOOR-OPERATED ELECTRIC HOISTS—Bulletin No. 127 describing and illustrating electric hoists of various types and capacities. — SHEPARD NILES CRANE & HOIST CORP., Montour Falls, N. Y.

1027. SINGLE BEAM CRANES—Bulletin No. 130 describing and illustrating the single beam type of overhead traveling crane.—SHEPARD NILES CRANE AND HOIST CORP., Montour Falls, N. Y.

1030. C-D HOLLOW WARE—This 32-page catalog, 11 profusely illustrated in color, shows Continental Diamond's line of boxes, trucks, cans, barrels, baskets and trays. Complete description and specifications are given on each item.—CONTINENTAL-DIAMOND FIBRE CO., Newark 38, Del.

MISCELLANEOUS . . .

1101. AUTOMATIC BOBBIN REFINISHER—A descriptive bulletin illustrating and describing method of refinishing throwing bobbins on a production schedule.—J. M. NASH COMPANY, 2360 N. 30th St., Milwaukee, Wis.

1102. BALING PRESSES—An illustrated folder describing this manufacturer's complete line of balers for all materials. Both Downstroke and Upstroke models.—ECONOMY BALER CO., Ann Arbor, Mich.

1103. UNBRAKO SCREWS — Illustrated 16-page booklet No. 570 gives data on Unbrako hollow set screws, with knurled point, self-locking features. Includes miscellaneous screw and locking nut data.—STANDARD PRESSED STEEL CO., Jenkintown, Pa.

1104. INTERPRETATION OF ANALYSIS — In compiling this brief collection of terms which most frequently appear in analysis of surface active chemicals, an attempt has been made to explain as clearly as possible the meaning of these terms to those who have had little or no chemical training. —NOPCO CHEMICAL CO., Harrison, N. J.

1105. AUTOMATIC QUILL POLISHER—Bulletin describes production machine for refinishing loom bobbins. Tells how quills can be kept in perfect condition at minimum labor cost.—J. M. NASH CO., 2360 N. 30th Street, Milwaukee 10, Wis.

1108. FABRICATION OF U. S. STAINLESS STEELS—136-page book covering use of stainless steel in textile equipment from cutting to cleaning. Includes corrosion-resistance tables for chemicals.—CARNEGIE - ILLINOIS STEEL CORPORATION, Pittsburgh, Penn.

1109. PUMPS—Catalog B-131-1 describes complete line of horizontal and vertical centrifugal pumps for every water handling service.—PEERLESS PUMP DIV., Food Machinery Corp., Los Angeles 31, Calif.

1111. BRUSHES—A 36-page booklet is now available which describes and illustrates this manufacturer's line of brushes for the textile industry.—GASTONIA BRUSH COMPANY, Gastonia, N. C.

1114. SCOTCH TEXTILE TAPES—Four page brochure containing photographs and descriptive information on the many uses for pressure sensitive Scotch tapes in the textile industry.—MINNESOTA MINING & MFG. CO., St. Paul, Minn.

TEXTILE INDUSTRIES, 806 Peachtree St., N.E., Atlanta 5, Ga.

Please send me, without obligation, free booklets or further information on New Equipment items described in the June, 1950, issue of TEXTILE INDUSTRIES.

(Fill in here numbers you select from these pages) . . . . . .

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. . . . . .

Name . . . . . .

Firm Name . . . . . Position . . . . . .

City and State . . . . . .

Street . . . . . .

SUPPLIERS' NEWS

WHAT THEY ARE DOING

The textile division of **United States Rubber Co.** has announced the appointment of Hubert O. Fry as sales representative for combed and carded yarns. Mr. Fry will assist H. E. Anderson in covering the states of Tennessee, Alabama, and Georgia, and will make his headquarters in Chattanooga, Tenn.

Harry F. Creegan has been made assistant sales manager for **Rodney Hunt Machine Co.**, with headquarters at the home office in Orange, Mass. M. Gilbert Hopkins replaces Mr. Creegan as representative in the Middle Atlantic territory.

William M. Keller succeeds Edward F. Burow as manager of the Huntingdon, Pa. plant of **Owens-Corning Fiberglas Corp.** Mr. Burow is now production manager of the general products division plant in Newark, O.

The newly organized Dispersed Pigments Division of **Acheson Colloids Corp.** has opened headquarters at 420 Lexington Ave., New York, N. Y. The headquarters and staff are headed by George Houston, technical sales representative of the division.

Mr. Houston

At a recent meeting, Charles A. Walmsley and Edwin P. Stevens were elected to the board of directors of **Cameron Machine Co.**, Brooklyn, N. Y.

The manufacture and sale of Turret Trucks, formerly produced by **Salsbury Corp.**, Los Angeles, Calif., have been taken over by the **Hyster Co.** The new line will be known as Hyster Salsbury Turret Trucks and will be sold and serviced by Hyster distributors.

Since the retirement from business of Ireland Bros., **Standard-Coosa-Thatcher Co.** has placed its own salesmen in Philadelphia, Pa., to solicit thread business. Offices are located at 123 S. Broad St. Also, J. Gross & Son, Inc., is stocking Standard-Coosa-Thatcher thread for delivery in the Philadelphia area.

Dr. A. J. L. Moritz, who retired last August as technical vice-president, has been elected a director of **American Enka Corp.** He continues to serve in a consulting capacity on operational and technical matters.

C. J. Backstrand has been elected president of **Armstrong Cork Co.** H. W. Prentis, Jr., was made chairman of the board of directors, and Kenneth O. Bates was re-elected vice-president and designated executive vice-president. All other officers were re-elected. The company has also an-

HALLOWELL

Steel Collars

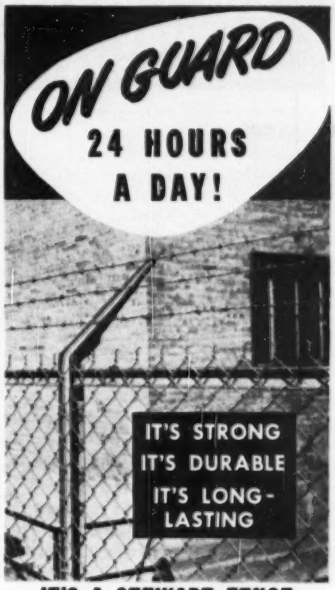
HALLOWELL Solid Steel Collars, functionally proportioned throughout . . . precision-machined so faces run perfectly true . . . are beautifully polished all over . . . yet they cost less than common cast iron collars. 3" bore and smaller are made from Solid Bar Stock. To make sure the collar won't shift on the shaft, they are fitted with the famous UNBRAKO Knurled Point Self-Locking Socket Set Screw—the set screw that won't shake loose when once tightened. HALLOWELL . . . a "buy word" in shaft collars . . . available in a full range of sizes for

IMMEDIATE DELIVERY

Write for name and address of your nearest HALLOWELL and UNBRAKO Industrial Distributors.

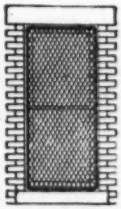
STANDARD PRESSED STEEL CO.

JENKINTOWN 34, PENNSYLVANIA



IT'S A STEWART FENCE

Notice the sturdy All-Beam framework . . . the extension arm and line post—an integral unit. Stewart Non-Climbable Chain Link Wire Fence, the heaviest and strongest manufactured, features a number of exclusive structural advantages you can't afford to overlook. Write for folder "Here's why you should buy a Stewart Chain Link Wire Fence."

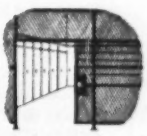


WINDOW GUARD
(Wire or Iron)

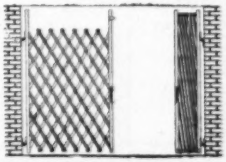
Made with round or channel frames to fit any size or shape opening. When requesting prices please give measurements and send diagrammatic sketch.

WIRE MESH PARTITIONS—Sectional

Fit any height or width. Easily and quickly erected. When writing for prices please give all measurements involved.



STEEL FOLDING GATES

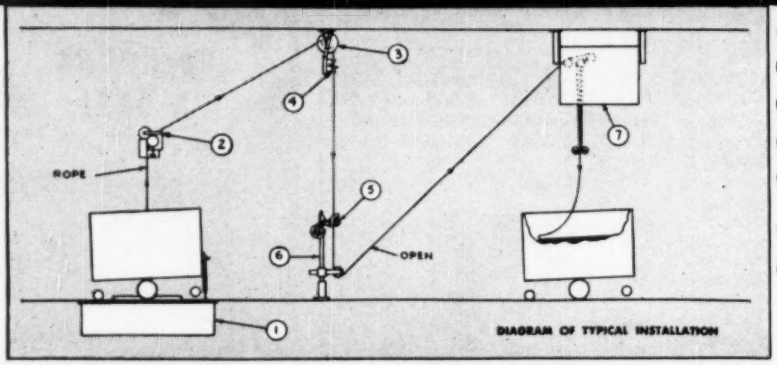


Made in single or double gate construction to fit any width opening. Prices on request. Please give width and height of opening.

THE STEWART IRON WORKS CO., INC.
1724 Stewart Block Cincinnati 1, Ohio

Stewart IRON and WIRE FENCES

CUT OPERATING COSTS!
ASSURE CONTINUOUS PRODUCTION!
with MOUNT HOPE CLOTH OPENING EQUIPMENT



1. Turntable Detwister
2. Tension Squeezer
3. Overhead Sheave
4. Detwister Switch
5. Swing Guider and Opener
6. Guider Stands
7. Plaiter

Draw Rolls
Stainless Steel Pot Eyes

YOU GET INCREASED PRODUCTION with MOUNT HOPE INSTALLATIONS because:

1. **MORE WORK HOURS** — no stopping of machines to remove twist.
2. **FULLY AUTOMATIC OPERATIONS** — no hand labor — opens cloth from the rope regardless of amount of twist.
3. **MAXIMUM FABRIC PROTECTION** — no sharp edges to cut cloth, cannot crease in next machine in line.
4. **MINIMUM MAINTENANCE** — no rapidly revolving parts.
5. **QUIET OPERATION** — no beating action.

For full information, including prices, write today for Bulletin SG-COI—no obligation, of course!

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Representatives: Parkman Collins Company, Boston — for Maine • Ingalls Engineering Company, Providence — for N. H., Mass., R. I., and Conn. • John H. Andresen, Inc., Paterson — for Southeastern N. Y., N. J., and Pa. • A. B. Julin, Watertown, New York — for Northern and Western N. Y. • Slaughter Machinery Company, Charlotte — for the South • S. S. Wilson, 1737 Howard St., Chicago — for Mid-West • Sidney Springer, Los Angeles — for California • W. J. Westaway, Ltd., Hamilton and Montreal — for Canada

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COUNTERS

★ RUGGED
★ ACCURATE
★ DEPENDABLE
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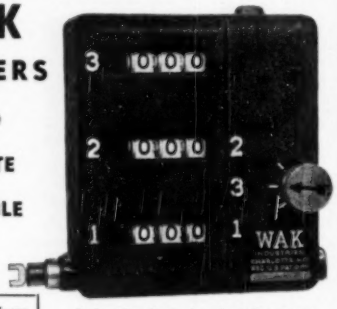

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Join the hundreds of smart mill operators who count on WAK for greater economy, extra years of service. Investigate the durability features of WAK Counters, and discover for yourself how they cut down repair and replacement costs.

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THIN BOILING STARCH

- *Always uniform*
- *Always dependable*
- *Boils thin*

The services of our technicians are always available without obligation.

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THE HUBINGER CO.
Keokuk, Iowa — Est. 1881

nounced plans for construction of new research laboratories near Lancaster, Pa., to be ready for use early in 1951.

Owens-Corning Fiberglas Corp. has announced the appointment of Reeve K. Biggers as sales manager of the Fiberglas Textile Products Division.

Automatic Transportation Co., Chicago, Ill., has announced the appointment of Lawrence J. Kline as sales manager of its Automatic division. Mr. Kline was formerly with Mercury Manufacturing Co., Chicago.

Buensod-Stacey, Inc., has opened a branch office in the Dixie Building, Room 418, Greensboro, N. C. M. L. Eakes, formerly in the Charlotte, N. C., office, will be in charge.

John Raasche, manager of the northwest territory for **Clinton Foods, Inc.,** has moved offices to 705-707 Palace Building, Minneapolis, Minn. Warehouse facilities are still at 3200 Snelling Ave. The sugar, syrup, and starch sales territory formerly covered by the late O. W. Nixon has been taken over by Paul A. Young.

Fred H. Pillsbury has succeeded his father, Edwin S. Pillsbury, as president of **Century Electric Co.** The elder Mr. Pillsbury is now chairman of the board of directors.

The Atwood and Universal divisions of **Universal Winding Co.** are being consolidated at the company's main plant in Cranston, R. I., in order to provide better control of production and service facilities.

Brig. General Howard L. Peckham has assumed command of the **New York Quartermaster Procurement Agency,** New York, N. Y., and Col. R. A. Howard, Jr., has returned to duty as commanding officer of the Chicago Quartermaster Purchasing Office.

President John J. Hayes has retired after more than fifty years' service with the **Charles Cooper Co., Inc.,** Bennington, Vt., but he will still serve in an advisory capacity. George A. Parsons, formerly president of Cook-P&N Machine Co., Inc., succeeds Mr. Hayes as president. Raymond M. Polley of Doehler-Jarvis Corp., has been named vice-president of the Vermont firm.

E. I. du Pont de Nemours & Co. has plans under way for construction of a new unit at Camden, S. C., to manufacture "Orlon" acrylic fiber in staple form. It will be adjacent to the plant now being built for manufacture of "Orlon" filament yarn.

Cochrane Corp., water conditioning equipment, has announced the appointment of Ervin J. Bookout as eastern sales manager.

Ira L. Griffin & Son, manufacturers' agents of Charlotte, N. C., have been appointed southern representatives for the Uxbridge "Gentle Air" drying unit for slashers, according to a recent announcement by **Bachmann Uxbridge Worsted Corp.**

Mr. Griffin, Jr.

Mr. Griffin, Sr.

A new Pacific division, which will include sales and other company activities for the western states, has been formed by **Nopco Chemical Co.** Perc S. Brown will head the division, assisted by Harold A. Swanson as general sales manager. Industrial chemical sales will be emphasized.

Arthur W. Knight, formerly vice-president and general manager, has been elected president and treasurer of **William Allen Son's Co.,** Worcester, Mass. He succeeds the late Walter B. Allen who died in January of this year.

The Calco Chemical Division of **American Cyanamid Co.** has announced the appointment of Dr. William B. Hardy as sectional director of the chemical research department, in charge of the entire research program in the field of vat dyes.

David E. Davidson has been elected vice-president for sales of the **Link-Belt Co.** Replacing him as general manager of the Pershing Road plant in Chicago is Eugene P. Berg, formerly assistant general manager.

Joseph D. Boyd, personnel manager of Melrose Hosiery Mills, High Point, N. C., is available to other organizations as personnel consultant, according to an announcement by Edgar E. George, agent, of High

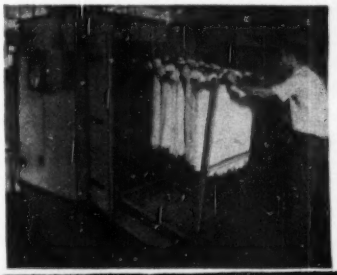
Series 15 of typical "H-W" CONDITIONER applications:

Signature HOSIERY COMPANY

reports increased yield of perfects and other money-saving advantages with use of new "H-W" CONDITIONER

"The installation of the 'H-W' Conditioner in our mill is proving very successful. We have definitely found our perfects on 15 denier monofilament nylon greatly increased. With the improved conditioning, there is a considerable reduction of snagging, a speeding up of seaming and looping, and mending reduced to a minimum. The Conditioner is very economical to operate, and we feel it will pay for itself within a few months."

Signature HOSIERY COMPANY
(Signed) F. Baumgartner



"H-W" CONDITIONERS for Nylon Hosiery are operated automatically by steam or electricity. View of installation opposite in Signature HOSIERY COMPANY mill, North Wales, Pa., is steam operated.

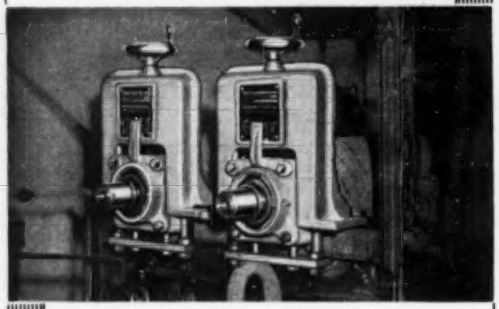
(Trade-Mark Reg. U. S. Pat. Office)

New Bulletin HI-3 on request.

The Industrial Dryer Corporation
STAMFORD, CONN.

NORCROSS Pressure Regulators

Apply Correct Squeeze Roll Pressure on EVERY Set



Norcross Pressure Regulators are now used in over 100 mills. By applying correct, uniform squeeze roll pressure for each specific set, they assure improved quality with higher operating speed and efficiency.

The Norcross Corporation also manufacture Recording Viscometers for maintaining uniformity of warp sizing.

Write for illustrated folders

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Newton 58, Mass.
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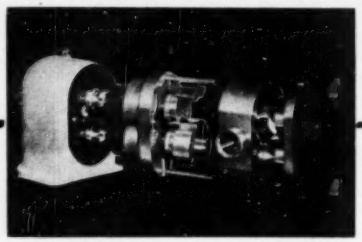
FOR YOUR SLASHER SIZE . . .

Use a WATEROUS TYPE 316 Stainless Steel Pump



Patent Pending

Here is a positive method of handling slasher size without aeriation or contamination of starch by oil or grease. Use a WATEROUS Type 316 Stainless Steel Pump. This positive type pump gives you pre-determined control capacities. Advanced pump design assures long life. Uses unique mechanical seal.

IDEAL FOR DYE VATS . . . WATEROUS pumps are easy to clean when changing colors.

- **Capacities: 1 to 125 gal. per minute**
- **Speed: 50 to 600 RPM**
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Blows ALL Fly, Lint and Litter from bobbins by air pressure; eliminates wire or brush hand method; does a cleaner job with speed, as fast as an operator can handle bobbins. Simply place bobbin in head, depress and a gust of air removes all trash in a jiffy. Model A has concaved head for bobbins of ⅞" O.D. or smaller; Model B with convex head for larger bobbins. Attach to bench, wall, post, etc., with screws or bolts. Alloy steel body. Furnished with either ¼" or ⅜" female N.P.T. connections.

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Point. Appointments can be arranged through Mr. George's offices.

Wilton Kilgore, formerly salesman out of the Atlanta, Ga., office, has been appointed assistant southern representative for **Draper Corporation.** His headquarters will remain in Atlanta.

Southern Belting Co., Atlanta, Ga., has added Mason H. Blandford to its sales staff. Mr. Blandford will represent the firm in Virginia and North Carolina, and will make his headquarters in Gastonia, N. C.

Mr. Blandford

W. O. Brown has been made manager of **Crane Co.'s** plumbing department, with headquarters in Chicago, Ill. He is succeeded as manager of the Richmond, Va., branch by H. D. Gibson, who formerly was manager at Norfolk, Va. G. B. Batchelor has been transferred from Roanoke to Norfolk, and P. J. Sineath, Jr., becomes manager at Roanoke.

United States Testing Co., Inc., has moved its New York City office to the McGraw-Hill Building, 330 West 42nd Street, with Thomas C. Ridgway in charge.

Eriez Manufacturing Co., Erie, Pa., has been appointed distributor for R.C.A. Electronic Metal Detectors, and will handle all sales in the United States and Canada. Eriez permanent magnetic separators will be sold to textile concerns on the west coast exclusively by Dick Dietrich, 1355 Market Street, San Francisco, Cal.

Raybestos-Manhattan, Inc., has moved its department of marketing and merchandising to the corporation's executive headquarters, 61 Willet St., Passaic, N. J. The New York district offices have been moved to 500 Fifth Avenue, New York, N. Y.

E. C. Bowen has been made manager of technical sales for **Macalaster Bicknell Co.,** Cambridge, Mass. He formerly was associated with National Technical Laboratories.

R. E. L. Holt, Jr., & Associates have been selected to handle the sales and service in seven southern states of the light metal textile beams manufactured by **Hayes Industries, Inc.**

E. F. Houghton & Co. have named Dr. James T. Eaton director of research. Dr. Eaton also was recently elected to the company's board of directors.

The **Dayton (Ohio) Rubber Company** has announced the following organizational changes: Carl W. Priesing has been appointed vice-president and general sales manager; Irve Eisbrouch, vice-president in charge of tire sales and associate lines; Leonard C. Strobeck, vice-president in charge of mechanical sales; Herbert S. Waters, vice-president and director of products.

Whitney Chain & Manufacturing Company, Division of Whitney Hanson Industries, Inc., has moved to new and larger headquarters at 3317-25 West Newport Avenue, Chicago 18, Illinois.

Commercial Factors Corp. has announced the election of Gerald D. Moran as assistant vice-president, in charge of new business and advertising. Mr. Moran has been with the company since 1938.

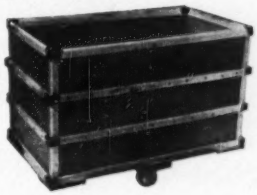
Mr. Moran

Ellsworth W. Crane, field representative for the **Durant Manufacturing Co.** for the past several years, has been made midwest regional sales manager for the Durant Productimeter counting and measuring machines. John C. Turner, of Atlanta, Ga., has been appointed representative for these machines in general industrial and textile fields in Georgia.

Turbo Machine Co., Lansdale, Pa., manufacturer of boarding and preboarding equipment, has appointed

For long and satisfactory Service

The Excel No. 1000 Fibre Truck



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EXCEL
Textile Supply Co.

"Excel Trucks Excel"

LINCOLNTON, NORTH CAROLINA

as southern representative the F. W. Warrington Co. of Charlotte, N. C.

The Markem Machine Co., Keene, N. H., has appointed the Markem Machine Agency, Inc., 9 Rockefeller Plaza, New York City, as its sole distributor in New York State and northern New Jersey.

Marshall L. Hall has been made New England sales representative for

Mr. Hall

Hart Products Corp., with headquarters at his home in Epping, N. H.

Two new vice-presidents were elected at a recent board meeting of **Fairbanks, Morse and Co.** O. O. Lewis, who has been with the firm since 1908, is vice-president in charge of sales, and F. J. Heaslip, a member of the organization for twenty-three years, is now in charge of purchases and traffic.

General Electric Co. has established a twelfth Apparatus Department sales district, to be known as the Mid-States District, with headquarters in St. Louis, Mo.

William W. Strasser, Jr. and Leslie A. Jacobson were elected recently to the board of directors of **Stein, Hall & Co., Inc.** The firm has also announced that its Providence, R. I. office has been moved to the Industrial Trust Building, 111 Westminster St. The textile laboratory has been established in the factory at 753 School St., Pawtucket, R. I. Erection of an addition to the plant of Stein-Davies Co., subsidiary of Stein, Hall, is expected to be completed by fall.

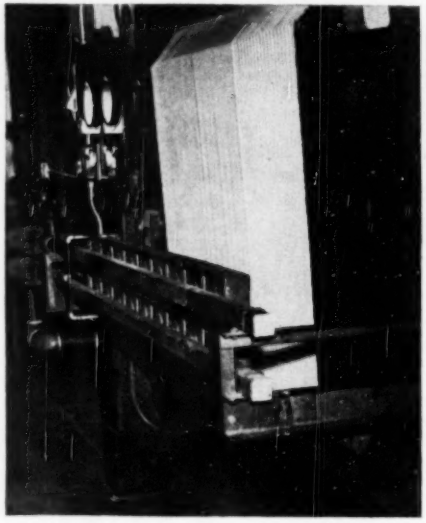
U. S. Testing Co., Inc., is studying the possibility of installing neutral testing laboratory facilities in Pakistan.

John H. Drexler, formerly with the Philadelphia district office, has been transferred to the Boston office of Carbide and Carbon Chemicals Division, **Union Carbide and Carbon Corp.**, as a technical representative.

Warren Vincent Shenk has joined the sales staff of **Florence Thread Co.**, Riverside, N. J., and has been

Mr. Shenk

assigned to the Pennsylvania territory. He will represent Florence for both custom yarn dyeing and the sale of dyed yarns for knitting and weaving.



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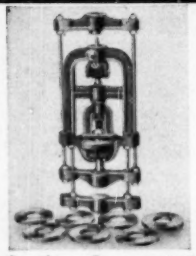

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GREENVILLE, S. C. FALL RIVER, MASS.

Earl Mendenhall has been elected president of **Sterling Electric Motors, Inc.,** succeeding Carl E. Johnson, who is now chairman of the board of directors. Mr. Mendenhall and Mr. Johnson have worked together more than 34 years in the field of electric power drives.

Richard H. Olson, formerly vice-president, has been elected president of Electric Machinery Manufacturing Co., a subsidiary of **Worthington Pump and Machinery Corp.** Mr. Olson succeeds Walther H. Feldmann,

Mr. Feldmann

who has assumed the office of vice-president in charge of sales for Worthington. The Worthington Corp. has also announced the selection of John J. Summersby as vice-president in charge of purchases, Frederic W. Thomas, general manager of purchases, and Carleton Reynell, general representative, sales and purchasing departments.

An office in the Warwick Hotel, New York, N. Y., has been established by the **First United States International Trade Fair,** for the accommodation of American firms along the Atlantic seaboard. Headquarters office of the Fair is in the Merchandise Mart, Chicago, Ill.

William Crabb & Co., Newark, N. J., manufacturers of textile pins, lags, and cylinders, has moved its operation from Newark to a location between Swannanoa and Black Mountain, N. C., on Highway 70, where a modern $350,000 plant has been built. The move was made to serve the southern textile industry better. The company's modern machine shop will also be available for outside work. In the future the company intends to manufacture aprons. Officials moving to the new location are J. C. Bennett, president; Marian A. Nobst, secretary-treasurer, John Daly of Asheville, general superintendent; A. P. Sommer, sales manager; and John C. Bennett, Jr., assistant superintendent.

Headquarters of **Mount Hope Machinery Company,** Taunton, Mass., have been moved to 15 Fifth Street, Taunton, where the new quarters will provide needed additional space.

Paul E. Ritt and John L. Worden have been added to the staff of **Harris Research Laboratories,** Washington, D. C.

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Opening for Superintendent, moderate size cotton textile mill on colored goods in the South. Reply to Box No. 388, TEXTILE INDUSTRIES, 806 Peachtree Street, N. E., Atlanta 5, Ga.

WANTED

Man desired to sell textile chemical specialties in established territory of Tennessee, Georgia and Alabama. Knowledge of textile processing preferable. Previous sales experience not necessary, but desirable. Reply to Box No. 387, TEXTILE INDUSTRIES, 806 Peachtree Street, N. E., Atlanta 5, Ga.

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Young man, 29, graduate Lowell Textile Institute and Harvard Business School, wishes to obtain employment in a cotton mill's own sales agency in NYC. Has 3 years of sales experience. Reply to Box No. 392, TEXTILE INDUSTRIES, 806 Peachtree Street, N. E., Atlanta 5, Ga.

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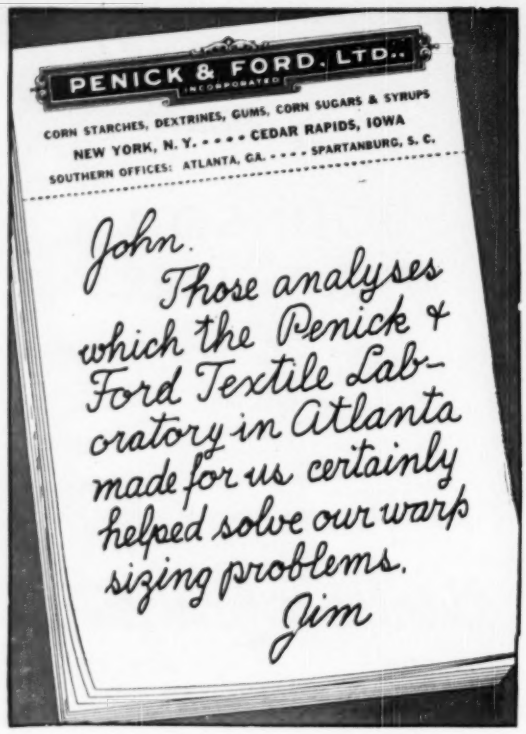
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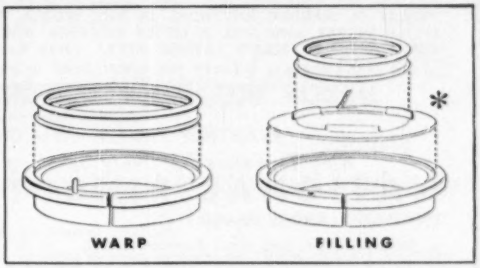

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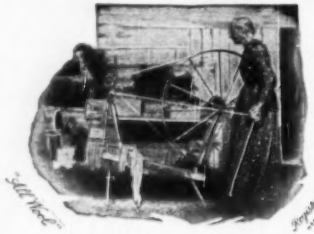

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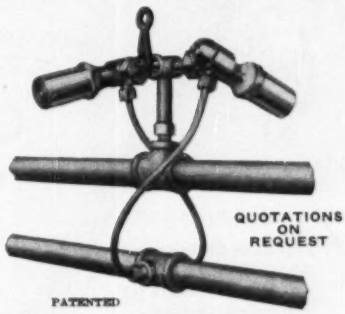

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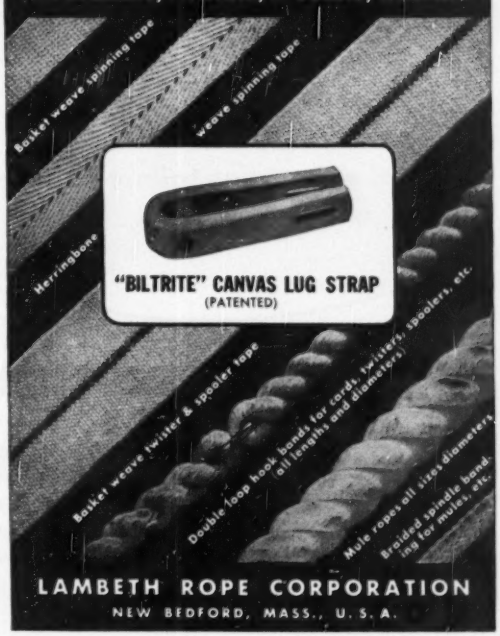
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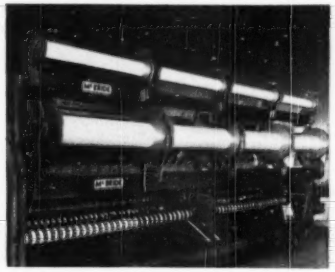
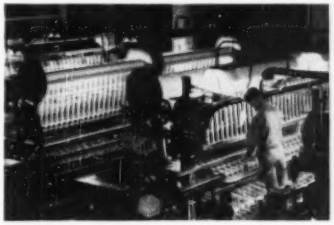
McBRIDE NARROW FABRIC LOOM BEAM INSTALLATIONS CUT COST AND IMPROVE PRODUCT QUALITY . . .

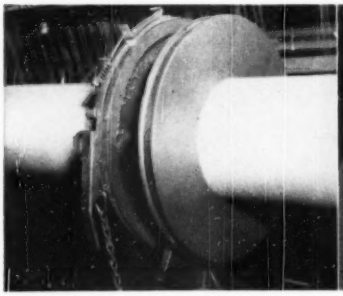




1. YOU SAVE the time and care of individual space tension adjustments because spools, hangers and weights are eliminated. **YOU SAVE** the down time of tying in short run spools. Beams are known to have runs of several months before replacement. **YOU SAVE** because McBRIDE LOOM BEAM INSTALLATIONS are made up of section beams that can be handled on normal width warping and slashing equipment.

2. PRODUCT QUALITY IS GREATLY IMPROVED because tension on each space is uniform. Tension is controlled on each beam with individual brake bands with quick tension release which can be brought back to original position without readjustment. One pleased mill owner remarked, "Our former firsts now look like seconds. We've set a new quality standard with McBride loom beam installations. We have less down time, more production time with McBride narrow fabric loom beam installation."*

3. COMPLETELY ENGINEERED INSTALLATION tailored to your individual looms reduces installation time to the barest minimum. McBride beams and mountings are built as complete units that can be quickly bolted in place on your looms.



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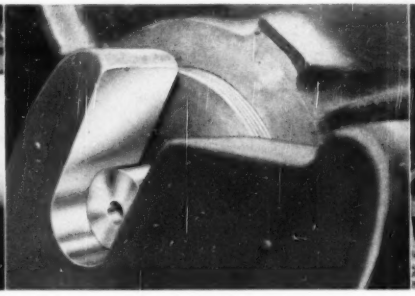

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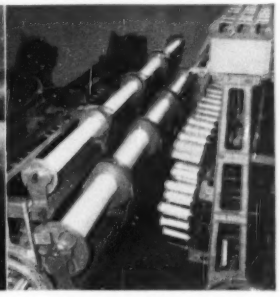

(c)

a. Close up of brake band shows ease of adjustment when necessary as beam runs down.

b. Detail of the McBride open end bearing and adjustable flange. (Optional) The completely machined open journal pocket is designed for easy loading of the full beam without danger of injuring the warp. These bearing stands are all machined in jigs, assuring perfect beam alignment clear across the loom.

c. Note how the McBride loom beam installation compares to the old top castle that it replaces. Great savings in down time and labor in tying up ends because of accessibility are realized in addition to improved product quality.

These looms may be placed back to back leaving a small aisle for handling the warp beams. On old installations, you gain the advantage of neat, clear aisles; and on new installations, you can gain floor space with the use of McBride section beams.

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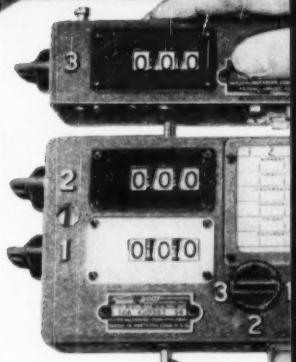

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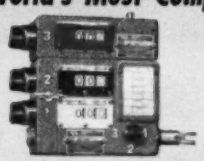
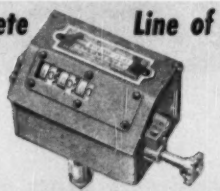
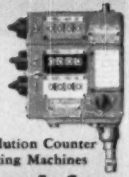


2-3 Convertible Hank Counter



Loom Cut Meter



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Above: Adding 3rd Counting Unit to 2-3 Convertible Pick Counter

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